

RTR NET NEUTRALITY REPORT 2022

Report pursuant to Art. 5 Par. 1 of Regulation (EU) 2015/2120
laying down measures concerning open internet access

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June 2022

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01

Preface

and executive summary

01 Preface and executive summary

Dear Reader,

Net neutrality continues to be a vital concern, affecting such widely varying topics as freedom of speech in the internet, restrictions to avoid certain risks, or Europe's innovative potential to ensure our economic future.

An open internet is one pillar of a democratic, open and pluralistic society: this is true today and will probably be even more so in future. It is only through an open internet that we can ensure every single individual's participation in political and economic life.

Within telecoms regulation, it is hard to identify any other issue that attracts such a high level of public visibility. And practically no other issue is as hotly and controversially discussed, within the sector and beyond. The lines dividing supporters and opponents of net neutrality can shift, depending on the particular aspect currently under discussion. But this situation also shows that when discussing net neutrality, we don't always mean the same thing. Such discussions can at times lead to, shall we say, misunderstandings. As more and more facets of everyday life are shifted to the internet, the issue of net neutrality and the debate surrounding it are as relevant and central as ever. In terms of significance, the issue has taken centre stage in society.

The 2022 Net Neutrality Report is the sixth report the RTR Telecommunications division has published on the openness of the internet in Austria. The report is intended to give the interested public a full overview of our activities as regulatory authority during the past twelve months, as well as of changes in and the current status of net neutrality in Austria.

We look back on an eventful year, including unexpected and, regrettably, even tragic developments. War in the heart of Europe. In relation to electronic communications, this development has raised questions, among other things how to respond to state-affiliated Russian media and the content these channels disseminate through the internet. The EU's adoption of sanctions against Russia has also involved national and EU regulatory authorities, specifically due to mandatory internet blocks of the websites run by RT and Sputnik.

Internet blocking has in general become an ongoing concern in recent years. The mechanism is being applied in a growing number of areas: copyright law, consumer protection law, as a wartime sanctions measure or even as a market control tool for products offered in the EU. As a result, ISPs are constantly being held accountable for enforcing legislation relating to online activities. The current legislative framework faces national regulatory authorities, providers and internet users with a dilemma, raising the question of how to strike a balance between legal certainty, legal protection and the fundamental rights of all stakeholders concerned. Here we need to recognise that the various circumstances leading to any network block also need to be differentiated in evaluation.

Surprising developments have also been seen in the context of zero-rating. The European Court of Justice ruled on zero-rating issues in late 2021, handing down three landmark decisions that have made it necessary to revise the BEREC Guidelines on the open internet. Based on these decisions, zero-rating products are generally not permitted if they discriminate in pricing based on commercial considerations when supplying data traffic to one and the same end user via that party's internet access service. Within the framework of the competent BEREC Working Group, our expert team at RTR worked feverishly together with other European regulatory authorities to revise those guidelines. Just a few days ago, the committee responsible at BEREC adopted and published the new version. This means that the 'classic' form of zero-rating is now a thing of the past. Austrian regulatory authorities RTR and TTK have already collected the required information and data from market participants and evaluated this material. Based on the picture that emerges and under consideration of the newly updated BEREC Guidelines, the necessary steps will be taken to safeguard net neutrality in Austria.

What activities relating to net neutrality have we seen among the Austrian high courts during the period under review? Occasioned by six cases involving network blocking, the Austrian Supreme Administrative Court examined the issue of net neutrality for the first time in late 2020, in its subsequent findings emphasising the importance of free access to an open internet. This court addressed net neutrality again in late 2021. The resulting ruling confirmed in full the regulatory authority's decision, which among other things had prohibited a provider from offering parts of an IPTV product on a priority basis as a 'specialised service'.

Looking to the past, in the preface to last year's Net Neutrality Report I had mentioned that net neutrality had been a highly controversial issue before 2015, during preparation of the Net Neutrality Regulation. A seemingly irreconcilable conflict at that time had centred on issues including: the opportunities for monetisation available to access networks, and the contribution to be made to infrastructure development by over-the-top players (OTTs), while the question was also debated as to how to ensure fairer competition (i.e. a level playing field) between access networks (ISPs) and OTTs. This debate died down once the EU adopted its net neutrality rules. But the calm was apparently short-lived, as the debate about content providers potentially contributing toward the 'use' of ISPs' networks has rekindled. As I write these words, the limits and relevance of net neutrality are being discussed in Brussels and throughout Europe – once again. This could soon result in decisions that would have broad consequences for the internet, ones that would affect each and every one of us.

Safeguarding net neutrality is an ongoing concern, with new or newly recognised challenges and opportunities arising almost daily in our regulatory activities. Yet, on the whole, we can confirm that in Austria the open internet has been ensured. In our work with ISPs, we as regulatory authority continue as previously to pursue the policy of identifying breaches of the Net Neutrality Regulation (through monitoring) while raising awareness for the topic among providers. The ultimate goal here is to create a stable environment for entrepreneurial activity and innovation, while at the same time consistently safeguarding end users' right to free access to an open internet. Where breaches of net neutrality rules are found, the regulatory authority envisages appropriate transition periods for their resolution, in line with statutory provisions. This permits companies to adjust to the new legal standards without experiencing disruptive interventions.

To summarise, we can conclude that, based on RTR's observations, the period under review has been marked by a positive trend in the availability of internet access services. Special mention is made here of how both download and upload traffic continued to accelerate during the reporting period. The continued availability of internet access services at a level of quality that duly reflects advances in technology has been consistently ensured, also in this reporting period.

Still, this is no reason to lay back in complacency, satisfied with what we have accomplished. New issues lurking around the corner will require new responses. In addition to the issues already mentioned, these include: QoS differentiation among internet connections, the emergence of platforms in mobile networks, network slicing and specialised services, new, opaque forms of user control, and the relationship of these issues to advancing open internet access. We continue to strive for cooperation built on trust with all stakeholders. Only within such a relationship can we recognise new developments and quickly arrive at satisfactory responses that take into account all relevant facts.

With this in mind, I hope the report makes for interesting and informative reading and I wish you speedy surfing within the boundless space of our open internet. In the meantime, we continue to go about making sure it stays that way!

Vienna,
June 2022

Klaus M. Steinmaurer

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02

Introduction: stakeholders and institutions in enforcement

02 Introduction: stakeholders and institutions in enforcement

This sixth Annual Report on Net Neutrality by the Telecommunications and Postal Services Division of the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) addresses the same major topics as covered in last year's report. The aim here is to provide readers with an overview of the regulatory authority's broad range of activities.

How open is the internet in Austria? Which measures had to be adopted by regulators in the reporting year (1 May 2021 to 30 April 2022, inclusive) to ensure the openness of the internet? What are the new product developments that, while potentially offering advantages for consumers, at the same time potentially harbour risks for the future sustainability of the internet?

As in the past, internet service providers (ISPs) continue to be the group primarily targeted by net neutrality provisions. The main concern of the EU Regulation is to keep pace with changing technical capabilities and support the potential new business models developed by ISPs, while avoiding any limiting of the internet's innovative power. The TSM Regulation accordingly identifies business practices, technical measures and obligations (such as ensuring transparency for end users) that are required or prohibited in order to uphold net neutrality. Besides ISPs, the Regulation both empowers and addresses in particular end users, meaning private citizens and businesses as well as providers of content, services or applications. These groups are entitled to free access to an open internet.

In Austria, the Telekom-Control-Kommission (TKK) and RTR are responsible for enforcing the TSM Regulation. Supervisory procedures are the TKK's responsibility, while the preceding request-for-information procedures are conducted by the RTR's Telecommunications and Postal Services Division. Another aspect that has bearing on net neutrality is the continued requirement for general terms of business and fee provisions to be submitted to RTR before commencement of the service. The TKK may prohibit the application of general terms of business if they contravene the Telecommunications Act 2021 (TKG 2021) or certain consumer protection regulations. All relevant changes in contract conditions (including those that affect net neutrality) must be submitted to the regulatory authority. These changes are reviewed for compliance with the minimum contractual content given in the TSM Regulation. This gives the regulatory authority an efficient early warning mechanism – even though breaches of other provisions of the TSM Regulation can only be prohibited *ex post*. What is more, the regulatory authority can impose reporting requirements on a company, which can help to better assess the impact on the market.

RTR is a convergent telecoms, postal and media organisation, and its divisions, for Telecommunications and Postal Services and Media, consult both mutually and with the TKK and the Austrian Communications Authority (KommAustria) on all key issues relating to net neutrality. This is significant also because certain net neutrality issues (such as specialised services) may also exhibit an overlap with media topics.

The present annual report stems from an obligation imposed on the European national regulatory authorities by the TSM Regulation. One aim of this obligation is to achieve a highly consistent approach to the application of the provisions of net neutrality throughout the EU.

In the work it conducts with ISPs, the regulatory authority continues to pursue the policy of identifying breaches of the TSM Regulation (monitoring) while raising awareness for the topic among ISPs, so as to ultimately create a stable environment for entrepreneurial activity and innovation. Where breaches of net neutrality rules are found, the authority envisages appropriate transition periods for their resolution. This permits companies to adjust to the new legal standards without experiencing disruptive interventions.

Furthermore, net neutrality is a topic that must always be approached in awareness of changes over time. Increasingly, issues are now emerging that relate to implementing net neutrality concepts in the context of the fifth generation mobile network standard (5G). Other questions relate to resource distribution across various virtual network elements (network slicing) and their classification within the scope of the TSM Regulation or network blocks arising from sanctions imposed by the EU on Russia as a result of the war in Ukraine. Debate about the potential financial involvement of content providers for their 'use' of ISP networks, discussed back in 2012 during the drafting of the TSM Regulation, has again been rekindled. As more and more areas of day-to-day life move online, attention is increasingly being given to the importance of free access and the openness of the internet – the principle of net neutrality.

Section 3 presents the reader with a chronological overview of the activities of the national regulatory authority, while section 4 focuses on current developments in relation to zero-rating. Section 5 clearly shows that the war in Ukraine and sanctions on Russia are now also affecting telecommunications, while section 6 reports on an event organised to mark the fifth anniversary of the Net Neutrality Regulation. Section 7 introduces measures for protecting net neutrality. Section 8 takes a look at other monitoring systems in relation to net neutrality and provides a set of key figures that describe the development of the internet in Austria. The last part of the report, section 9, presents a brief summary of the projects and events expected in the next reporting year.



03

Timeline

of regulatory authority activities

03 Timeline of regulatory authority activities

Figure 01: Timeline of events in the reporting period

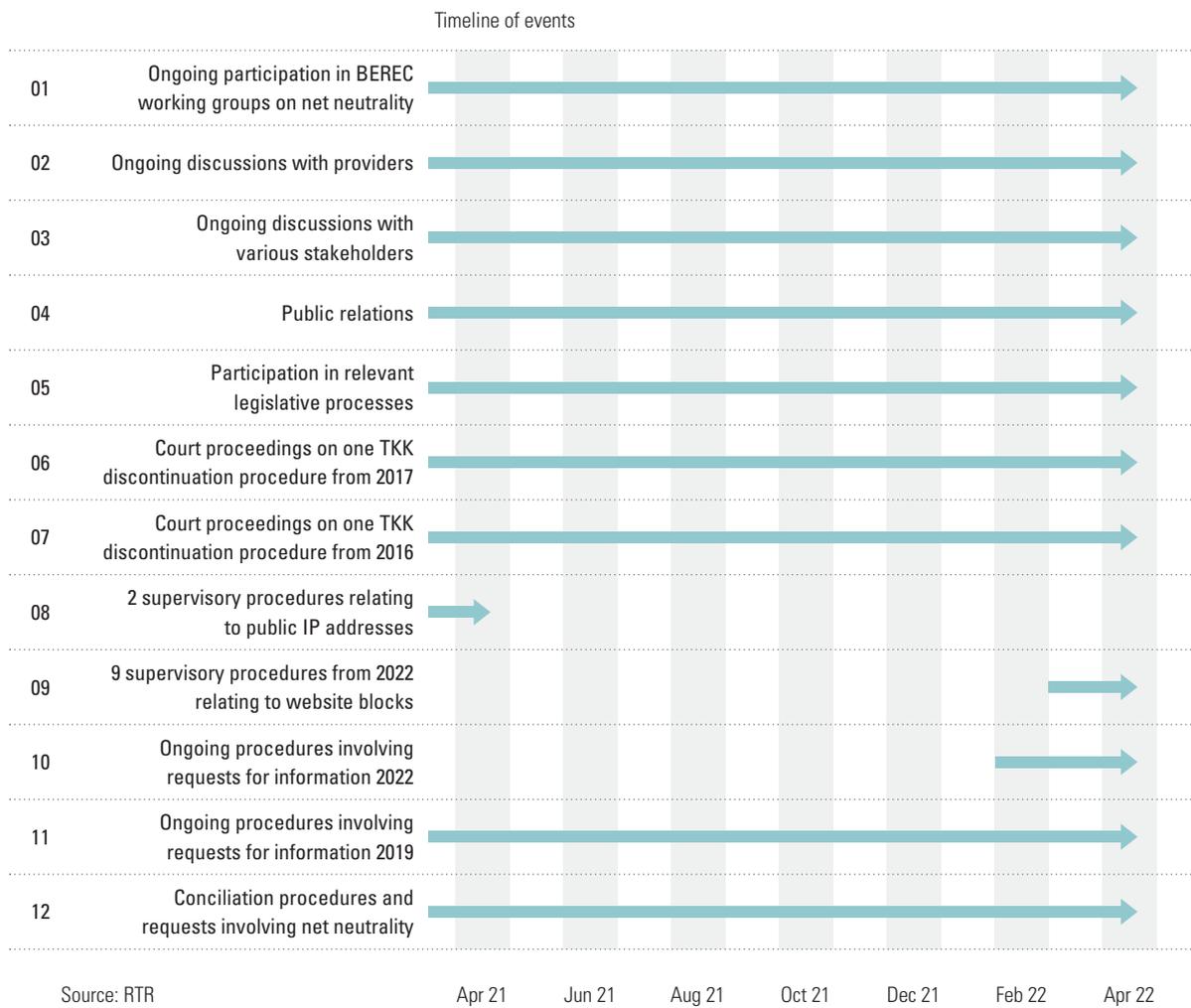


Figure 1 shows the chronological sequence of relevant events in the reporting period (May 2021–April 2022). The table below gives an overview of these events, with a brief description as well as some historical context. Further details about these procedures can be found in section 7.

Table 01: Timeline of events in the reporting period

Work in EU bodies		
01	Current	<p>Participation in the BEREC Open Internet Working Group on net neutrality/the open internet</p> <p>Topics in 2021: Update to the Guidelines on the Implementation of the Open Internet Regulation, Report on the Implementation of Regulation (EU) 2015/2120 and BEREC Guidelines on the Implementation of the Open Internet Regulation, Collaboration on the Net Neutrality measurement tools and evolution of the regulatory assessment methodology, Report on the Internet Value Chain, Report on COVID-19 crisis–lessons learned regarding communication networks for a resilient society</p> <p>Topics in 2022: Update to the Guidelines on the Implementation of the Open Internet Regulation, Implementation of Regulation (EU) 2015/2120 and BEREC Guidelines on the Implementation of the Open Internet (OI) Regulation, Collaboration on the Net Neutrality Measurement tools and evolution of the regulatory assessment methodology (carry over), Report on the Internet Ecosystem (carry over; previously: Report on the Internet Value Chain)</p>
National status quo analysis/discussion with ISPs		
02	Current	Discussions with providers on the topic of net neutrality
03	Current	Talks with various stakeholders
04	Current	Public relations
05	Current	Participation in relevant legislative processes
Enforcement of TSM Regulation		
06	Nov 2017 – April 2022	An ISP lodged a complaint in response to the TKK's decision to impose a cease order and submitted a petition to recognise the suspensory effect. The Federal Administrative Court (BVwG) rejected this petition to recognise the suspensory effect in 2018. In April 2022, the ISP withdrew its complaint and the BVwG ruled to terminate proceedings.
07	Oct 2016 – December 2021	An ISP lodged a complaint in response to the TKK's decision to impose a cease order and submitted a petition to recognise the suspensory effect. The Federal Administrative Court (BVwG) rejected this petition to recognise the suspensory effect in 2018. In 2020, the complaint was rejected by the BVwG. In June 2020, the ISP appealed to the Supreme Administrative Court (VwGH), submitting a petition to recognise the suspensory effect. In December 2021, this appeal was rejected as unjustified by the VwGH.

Enforcement of TSM Regulation		
08	April 2021	In April 2021, the TKK issued a decision against a provider relating to failure to assign (at least) a dynamic public IPv4 address to end users. The ISP has submitted no complaint in response to the decision.
09	March 2022	Nine supervisory procedures in conjunction with the announcement of website blocks on the part of ISPs (in the context of Council Regulation (EU) 2022/350) were initiated by the TKK.
10	Feb 2022	Initiation of four request-for-information procedures relating to traffic management measures, and the equal treatment and non-discrimination of certain content, services or applications (zero-rating options).
11	Feb 2019 – Apr 2021	Continuation by the RTR Telecommunications and Postal Services Division of the request-for-information procedures initiated previously by the TKK against one ISP. The implementation period in this case expires only in the course of 2022 (for further details, see section 7.1).
12	Current	Handling of conciliation procedures and enquiries relating to net neutrality (for further details, see section 7.9).



04

Zero-rating

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04 Zero-rating

4.1 New decisions by the ECJ

With regard to net neutrality, the year 2021 was marked by three rulings – C-854/19¹, C-5/20² and C-34/20³ – by the European Court of Justice (ECJ) with far-reaching repercussions. The rulings once again reflect the ECJ’s interpretation of the Net Neutrality Regulation, which enshrines the openness of the internet as a fundamental principle. While two ECJ decisions from 2020 substantively confirmed the BEREC Guidelines (issued on the basis of the TSM Regulation) used by European regulatory authorities,⁴ the new decisions from 2021 looked more closely at the underlying principles of zero-rating, necessitating a more indepth engagement with the topic on the part of the regulatory authorities and, ultimately, adjustments to the BEREC Guidelines.⁵

‘Zero-rating products’ refers to products that do not deduct the data consumed by designated applications (apps) or services/content from the data volume included in a customer’s subscription rate. Such data volumes are therefore charged at a rate of ‘zero’ (i.e. are ‘zero-rated’). Asked to pass judgement on the admissibility of certain zero-rating products, the ECJ in its decision clearly stated that these zero-rating options contravene net neutrality standards as set out in the TSM Regulation. Accordingly, the restrictions on bandwidth, tethering or roaming that are imposed with these zero-rating products upon activation of such an option are incompatible with EU law.

In its decision, the ECJ defines a ‘zero-rating option’ as a business practice whereby one provider of internet access services (ISP) applies (in whole or in part) a zero-rated or discounted tariff plan to data traffic that is associated with a certain application or a certain category of applications, as offered by the business partners of this ISP. This data is not deducted from the data package allotted by the user’s basic subscription. In this context, two German courts asked the ECJ to issue a decision on whether actions taken by providers to limit the bandwidth of internet access services or to restrict tethering or roaming when customers select such a zero-rating option are compatible with EU law.

The cases specifically addressed products from Vodafone GmbH and Telekom Deutschland GmbH in Germany. In the case of Vodafone, the zero-rating options collectively referred to as the ‘Vodafone Pass’ (‘Video Pass’, ‘Music Pass’, ‘Chat Pass’ and ‘Social Pass’) applied only in Germany. When roaming, the data volume consumed by using partner company services was deducted from the data package included in the user’s basic subscription. In addition, Vodafone also deducted the data consumed when using a hotspot (tethering) from the data package included in the subscription. Telekom Deutschland offered its

¹ ECJ, 2 September 2021, C-854/19. Accessible from: <http://curia.europa.eu/juris/documents.jsf?num=C-854/19>

² ECJ, 2 September 2021, C-5/20. Accessible from: <http://curia.europa.eu/juris/documents.jsf?num=C-5/20>

³ ECJ, 2 September 2021, C-34/20. Accessible from: <http://curia.europa.eu/juris/documents.jsf?num=C-34/20>

⁴ ECJ 15 September 2020, C-807/18, C-39/19 (Grand Chamber) – Telenor Magyarország. Available at <https://curia.europa.eu/juris/liste.jsf?language=de&num=C-807/18>

⁵ The BEREC Guidelines help the European regulatory authorities to interpret the EU Net Neutrality Regulation and must be followed as closely as possible by these authorities in their procedures.

customers an add-on option for certain subscriptions in the form of a zero-rating option termed 'Stream On'. When this option was activated, the data volume used when consuming audio/video streaming services from Telekom Deutschland content partners was not deducted from the data package included in the basic subscription; all transfer speeds were reduced once the package was used up. However, consumers who activated this option consented to having their band-width limited to a maximum of 1.7 Mbps for video streaming, regardless of whether this video was being streamed from content partners or from other providers.

In its three rulings, the ECJ clarified that this zero-rating option applies commercial considerations to distinguish between certain kinds of internet traffic, by not deducting from the base subscription package the data consumed when using specified partner applications. A business practice of this nature does, however, contravene the general requirement imposed by the TSM Regulation to treat traffic equally without discrimination or disruption. Since the bandwidth limitation and restrictions on tethering or roaming are applied only if the zero-rating option is activated – an option that breaches the open internet provisions of the TSM Regulation – such practices therefore also breach the Regulation itself.

4.2 Follow-up activities by the regulatory authority

4.2.1 International activities

The ECJ rulings were published on 2 September 2021. Just one week later, on 7 September 2021, BEREC, following several internal ad hoc meetings of its Open Internet working group and well aware of the potential impact of these new judgements, announced that it would analyse the rulings in detail and amend the relevant BEREC Guidelines accordingly.⁶

At the next BEREC plenary, a meeting of the heads of the national regulatory authorities, on 30 September 2021, a decision was made to amend BEREC's Guidelines for the TSM Regulation, with particular attention being paid to the topic of zero-rating. This decision was announced as part of the public debriefing on 6 October 2021.⁷ To ensure the broadest possible assessment of the impact of the ECJ's rulings from a legal perspective and to account for all aspects during the analysis, BEREC simultaneously launched a consultation that invited the general public to communicate their interpretation of these rulings.⁸

⁶ BEREC assesses the impact of the recent Court of Justice of the EU judgements on the Open Internet Regulation, 7.9.2021, accessible from: https://berec.europa.eu/eng/news_and_publications/whats_new/8506-berec-assesses-the-impact-of-the-recent-court-of-justice-of-the-eu-judgements-on-the-open-internet-regulation

⁷ BEREC will update Guidelines following the Court of Justice rulings on zero-rating, publishes recently adopted reports and calls for stakeholder's input, BoR (21) 151, 6.10.2021, accessible from: https://berec.europa.eu/eng/document_register/subject_matter/berec/press_releases/10047-press-release-berec-will-update-guidelines-following-the-court-of-justice-rulings-on-zero-rating-publishes-recently-adopted-reports-and-calls-for-stakeholders-input

⁸ Call for stakeholder input to feed into the incorporation of the ECJ judgments on the Open Internet Regulation in the BEREC Guidelines, BoR (21) 149, 6 October 2021, accessible from: https://berec.europa.eu/eng/document_register/subject_matter/berec/public_consultations/10044-call-for-stakeholder-input-to-feed-into-the-incorporation-of-the-ecj-judgments-on-the-open-internet-regulation-in-the-berec-guidelines

A total of 26 stakeholders, representing civil society organisations, providers of internet access services, researchers and major content providers, responded to this call for comments.⁹ At the same time, BEREC's Open Internet Expert Working Group set to work on drafting a detailed internal legal evaluation of the ECJ decisions. This document was adopted at the fourth plenary in Stockholm on 9 to 10 December 2021 and approved for further internal use.

Based on answers submitted in the course of the consultation and its legal assessment of the impact of the ECJ rulings, BEREC proceeded to revise its Guidelines for interpreting the TSM Regulation. These Guidelines, amended as recently as 2020, were to be modified to reflect the ECJ's new interpretation of the Regulation while leaving other aspects of the Guidelines unchanged. Ultimately, these amendments resulted in greatly simplified guidance on aspects needing to be addressed in order for zero-rating products to be permissible. While the Guidelines had previously stated that permissibility should be based on a test of proportionality, which would account for such aspects as cost, openness for content providers, market circumstances or subscription-based data packages,¹⁰ this test was obsolete by the ECJ's new interpretation of the TSM Regulation. Essentially, all zero-rating products that are not application-agnostic, and are unable to cite a specific and pertinent exemption, are not permitted.

BEREC published a draft of the revised Guidelines on 15 March 2022.¹¹ Another consultation was duly started in this context, for which interested stakeholders and the general public were invited to submit their comments from 15 March 2022 to 14 April 2022.¹² The comments submitted had not been published by the close of the reporting period. Publication on the BEREC website is planned for reasons of transparency and will have been completed by the time this report is published. In addition to the consultation submissions, BEREC will also be addressing stakeholder input in a separate 'Consultation Report'. The publication of all of these documents is planned at the public debriefing on 15 June 2022.

In conclusion, it may be stated that BEREC began an analysis of the rulings and a revision of its Guidelines within the space of a few weeks. Many aspects need to be accounted for in implementing these rulings, while the consequences of the ECJ rulings for the national situation will vary from one Member State to another. This again highlights the need to coordinate responses from national regulatory authorities within BEREC. To properly account for the interests, needs and interpretations of the various stakeholders, two public consultations were held as part of the overall process. Roughly nine months passed between the publication of the ECJ rulings and the publication of the BEREC Guidelines amended to reflect this adjudication.

In parallel to the work by BEREC and the national regulatory authorities, an assessment of the rulings and an investigation of their impact on the TSM Regulation was completed by the European Commission. No consultations were made with respect to stakeholders or public opinion in the reporting period.

⁹ BEREC publishes the received stakeholders' input to feed into the incorporation of the ECJ judgments on the Open Internet Regulation in the BEREC Guidelines, 28 October 2021, accessible from: https://berec.europa.eu/eng/news_and_publications/whats_new/9054-berec-publishes-the-received-stakeholders-input-to-feed-into-the-incorporation-of-the-ecj-judgments-on-the-open-internet-regulation-in-the-berec-guidelines

¹⁰ See esp. the Annex in the previous Guidelines, BoR (20) 112.

¹¹ Draft Update to the BEREC Guidelines on the Implementation of the Open Internet Regulation, BoR (22) 30, 10 March 2022, accessible from: https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/10210-draft-update-to-the-berec-guidelines-on-the-implementation-of-the-open-internet-regulation

¹² Public consultation on draft BEREC Guidelines on the Implementation of the Open Internet Regulation, 19 April 2022, accessible from: https://berec.europa.eu/eng/news_consultations/Closed_Public_Consultations/2022/9397-public-consultation-on-draft-berec-guidelines-on-the-implementation-of-the-open-internet-regulation

4.2.2 International activities

RTR also investigated the impact of these rulings on Austrian zero-rating products. This took place alongside the regulatory authority's active participation in BEREC's European expert working groups on amendments to the Guidelines for interpreting the TSM Regulation in light of the rulings on zero-rating adopted by the ECJ. The regulatory authority informed providers about the rulings and initiated request-for-information procedures pursuant to Art. 5(2) TSM Regulation in the current reporting year. These procedures involved four providers of (non-application-agnostic) zero-rating products. In the course of these procedures, the providers supplied information about the market situation, the number of customers using the affected products and the applicable contract terms. Section 7.4 presents key figures from this data as supplied.



05

EU sanctions against Russia: network blocks for RT and Sputnik domains

05 EU sanctions against Russia: network blocks for RT and Sputnik domains

The work of the authority in the reporting period was necessarily affected by the sanctions against Russia, imposed “in view of Russia’s actions destabilising the situation in Ukraine” (wording of Council Regulation (EU) 2022/350).¹³ To counter a systematic international campaign of media disinformation, the European Union adopted Regulation (EU) No 269/2014, as amended by Council Regulation (EU) 2022/350 (‘EU Sanctions Regulation’) on 1 March 2022, which required operators to cease broadcasting content from numerous channels operated by Russia Today English, Russia Today UK, Russia UK Germany, Russia Today France, Russia Today Spanish and Sputnik, with immediate effect.

Since an EU Regulation based on Art. 215 of the Treaty on the Functioning of the European Union (TFEU) was chosen as the sanction instrument, no national implementation was necessary. The requirement was immediate and binding on all operators. National accompanying legislation concerned questions of responsibility and penalties.

While the Annex to the Regulation listed the specific media channels but not any particular domains to be blocked, BEREC coordinated a European response with the aim of producing a common interpretation. Just three days after the publication of the Regulation, on 4 March 2022, BEREC clarified matters, stating that the TSM Regulation did not impede implementation of the sanctions. As the Regulation constitutes an exception as defined by Art. 3(3) subparagraph 3(a) TSM Regulation, the blocks are permissible.¹⁴ On 11 March 2022, BEREC provided further details, supplying a list of specific domains that would be covered by this exceptional circumstance.¹⁵

On 10 March 2022, RTR’s Telecommunications and Postal Services Division (RTR FB TKP) and the TKK had clarified that the EU Sanctions Regulation was directly applicable and required no national implementation, also noting that blocks imposed due to the EU Sanctions Regulation were compatible with the TSM Regulation.¹⁶ Providers were also requested to report the timely and targeted setup of the network blocks to the regulatory authority.

During the reporting period, several procedures were initiated based on such notifications that had not yet been completed by the end of this period.

On 13 April 2022, supplementing the immediate applicability of the EU Sanctions Regulation, the Audio-visual Media Services Act (AMD-G) was amended¹⁷ to extend to ISP measures the remit of the Austrian Communications Authority (KommAustria) as a prosecuting authority. On 14 April 2022, KommAustria published a list of domains that were to be considered as unequivocally targeted by the EU Sanctions Regulation.¹⁸

¹³ See Council Regulation (EU) No 833/2014 of 31 July 2014 concerning restrictive measures in view of Russia’s actions destabilising the situation in Ukraine, accessible from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014R0833>

¹⁴ BEREC: Open Internet Regulation is not an obstacle in implementing EU sanctions to block RT and Sputnik, accessible from: https://berec.europa.eu/eng/news_and_publications/whats_new/9321-berec-open-internet-regulation-is-not-an-obstacle-in-implementing-eu-sanctions-to-block-rt-and-sputnik

¹⁵ BEREC supports ISPs in implementing the EU sanctions to block RT and Sputnik, accessible from: https://berec.europa.eu/eng/news_and_publications/whats_new/9340-berec-supports-isps-in-implementing-the-eu-sanctions-to-block-rt-and-sputnik

¹⁶ RTR, Netzneutralität: Information über Verkehrsmanagementmaßnahmen durch Anbieter von Internetzugangsdiensten nach der EU-Sanktionsverordnung 2022/350 (Net neutrality: notification of traffic management measures by providers of internet access services in line with EU Sanctions Regulation 2022/350), accessible from: https://www.rtr.at/TKP/aktuelles/veroeffentlichungen/veroeffentlichungen/verkehrsmanagementmassnahmen_eu-sanktionsverordnung.de.html

¹⁷ See Art. 64 Par. 3a AVMDG as amended by Federal Law Gazette (FLG) I No. 55/2022.

¹⁸ https://www.rtr.at/medien/aktuelles/veroeffentlichungen/Veroeffentlichungen/Sonstiges/Erlaeuterungen_zu_Paragraf_64_Abs_3a_AMD-G.de.html

Towards the end of the reporting period, this approach as adopted by the participating authorities and the providers led to a situation where the websites run by the “legal persons, entities or bodies” targeted by the EU Sanctions Regulation are now largely inaccessible from the Austrian internet.

To furnish the interested public with an overview of the situation on the openness of the internet, RTR FB TKP maintains a list of domains blocked in Austria, subdivided by categories such as legal basis or provider network. The list can be viewed (in German) at https://www.rtr.at/TKP/was_wir_tun/telekommunikation/weitere-regulierungsthemen/netzneutralitaet/nn_blockings.de.html.



06

Virtual talk:
Fifth Anniversary of Net Neutrality

06 Virtual talk: Fifth Anniversary of Net Neutrality

Figure 02: Announcement of Fifth Anniversary of Net Neutrality event



**5 Jahre
NETZNEUTRALITÄT**
Rückblick und künftige Herausforderungen

Dienstag, 6. Juli 2021
16:00 UHR - 17:30 UHR

 **RTR**
www.rtr.at
Eine Veranstaltung des Fachbereichs
Telekommunikation und Post

Impulsstatements und Diskussion

Klaus M. Steinmaurer
(Geschäftsführer RTR
Fachbereich Telekommunikation und Post)

Barbara van Schewick
(Professor of Law at Stanford Law School)

Rudolf Schrefl
(CEO Hutchison Drei Österreich)

Moderation: Helmut Spudich

Die Veranstaltung findet
über Zoom statt.

Anmeldung und weitere
Informationen:
www.rtr.at/5_jahre_nn

Entgeltliche Einschaltung

Source: RTR

To mark the fifth anniversary of the European Net Neutrality Regulation and the publication of the 2021 Net Neutrality Report, RTR's Telecommunications and Postal Services Division hosted a virtual talk with a number of key individuals working in the field to discuss the topic of net neutrality from the perspective of business, regulation and the market. Klaus M. Steinmaurer, managing director of RTR's Telecommunications and Postal Services Division, opened the talk with a brief summary of the history of net neutrality and related regulatory issues. The first panellist to follow this keynote was Barbara van Schewick, Professor of Law at Stanford and an internationally recognised expert on the topic. In her presentation, Professor van Schewick addressed the differences between the USA and Europe, praising the European Net Neutrality Regulation and the Guidelines that BEREC had created in 2016 (and last amended in 2020) to support the national regulatory authorities in achieving a uniform implementation of the provisions of the European framework. In this context, she also acknowledged the work completed by RTR as well as regulatory practice at the TKK. The third speaker was Rudolf Schrefl, CEO of Hutchison Drei Österreich GmbH, who then addressed the attimes tense relationship between network operators and service providers, and highlighted the challenges net neutrality provisions pose to providers when designing products.

The concluding roundtable discussion addressed the prioritisation of internet services. “If we compare the internet with the 16-lane Avenida 9 de Julio, then we are faced with the question of whether all drivers should keep to one speed or whether some of them – depending on need, as an autonomous decision – may in fact drive faster,” commented Steinmaurer, illustrating the focal point of this discussion. In conclusion, the general consensus was that, if we assume decisions about prioritisation are made exclusively by users – who also pay for the privilege – then userdriven prioritisation of online services gives operators and service providers alike greater latitude in designing products, which would in turn ultimately promote competition.



07

Potential breaches of net neutrality and procedures

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07 Potential breaches of net neutrality and procedures

Since the enactment of the TSM Regulation, the regulatory authority has reviewed the products (previously) offered on the market as well as the technical and commercial practices adopted by ISPs on a continual basis, so as to secure net neutrality in Austria.

Of the resulting procedures to be completed with the issuing of a decision, one procedure had been decided (by the Federal Administrative Court, BVwG) on 30 April 2020. In June 2020, the ISP appealed to the Supreme Administrative Court (VwGH), submitting a petition to recognise the suspensory effect. On 9 December 2021, this appeal was rejected as unjustified by the VwGH and the decision of the regulatory authority was confirmed in all points (R 3/16). A complaint was also raised in response to another decision to impose a cease order by the TKK and a petition to recognise the suspensory effect submitted. The BVwG also rejected this petition to recognise the suspensory effect. In April 2022, the ISP withdrew its complaint and a termination of the process was duly issued by the BVwG (R 5/17). In April 2021, a decision was issued against another ISP. This decision has since become final (R 9/19).

As in previous reporting periods, the work of the regulatory authority focused on auditing the products and the technical/commercial practices adopted by ISPs, first notifying the latter of any potential breaches identified and consulting with them to identify legally compliant solutions.

As already stated in the 2021 report, the procedures completed in the reporting period were able to identify technical and commercial practices that were problematic in light of the provisions of Art. 3 of the TSM Regulation and therefore required investigation.

Table 02: Summary of problematic practices in light of the TSM Regulation

Type of practice		Description
01	Port blocking	Certain UDP or TCP ports are blocked for incoming and/or outgoing traffic. This might render certain services unusable, which is a contravention of Art. 3(1) and (3) of the TSM Regulation. A more detailed description is given in section 7.1.
02	Private IP addresses and services	Customers are assigned private IP addresses, via network address translation (NAT). This prevents these customers from using or providing their own services; this right follows, however, from Art. 3(1) of the TSM Regulation. A more detailed description is given in section 7.2.
03	Zero-rating	The data volume used by a specific application or for a specific CAP is not counted towards the data volume cap included in the customer’s subscription. A more detailed description is given in section 4 and section 7.4.

Type of practice		Description
04	Specialised services	A specialised service is a service that is not offered by the ISP via normal internet access service (IAS) but instead as a prioritised/optimised service. To be offered as a specialised service as defined by Art. 3(5) of the TSM Regulation, a service must first satisfy certain conditions.
05	Technical discrimination and restriction of internet access	Traffic modification/redirection or the placing of restrictions on the IAS contravenes Art. 3(3) of the TSM Regulation.
06	Disconnection of IP connections	Automated disconnection of IP connections restricts the rights of the end user to use or provide their own services (Art. 3(1) TSM Regulation).
07	Network blocking	Network blocks contravene net neutrality by their very nature, and are therefore only permitted if they are prescribed by law and the blocks are proportionate in the specific case so addressed. Legal provisions requiring ISPs to set up blocks can be found in the Copyright Act (UrhG), in the context of cooperative crossborder consumer protection (VBKG), in relation to market surveillance (EU Market Surveillance Regulation) or in the form of sanctions (EU Sanctions Regulation). A more detailed description is given in section 7.5.
08	Domain blocks resulting from the EU Sanctions Regulation (Council Regulation (EU) 2022/350)	The regulatory authority considers the EU Sanctions Regulation to be an EU legislative act in the sense of Art. 3(3) subparagraph 3(a) TSM Regulation. Measures adopted by ISPs in line with the accepted interpretation of the Regulation therefore do not normally breach applicable laws aimed at safeguarding net neutrality. In accordance with its adjudicatory practice, the TTK reviews the proportionality of all technical traffic management measures adopted to comply with special regulations. A more detailed description is given in section 5 and section 7.5.

In previous reporting periods, many smaller fixed and mobile network provider have been reviewed in line with this practice, alongside the major providers of internet access services. A total of twelve ISPs were selected, to whom questionnaires requesting information about products and technical practices were sent. On a positive note, we emphasise numerous ISPs' continuing readiness to cooperate, without the need for a formal supervisory procedure. As a result, only one of these procedures was pending at the end of the current reporting period. For this procedure, a longer implementation period applies for technical changes aimed at ensuring compliance with the TSM Regulation. All other request-for-information procedures had been terminated, although two only after submitting them to the TTK for initiation of a supervisory procedure.

In all procedures, the focus of TSM Regulation violations was primarily on the non-assignment of public IPv4 addresses, port blocking and the forced disconnection of IP connections. The two procedures that had been referred to the TTK for the initiation of a supervisory procedure pursuant to Art. 5(1) of the TSM Regulation largely concerned a refusal to assign public IP addresses to end users on the part of these two MVNOs, both operating in the low-end segment. It was possible to drop a supervisory procedure against one of these MVNOs in April 2021. In the same month, the TTK also issued a decision against the second MVNO as a result of the non-allocation of public IP addresses to end users (R 9/19). Both procedures were very time-consuming, since technical audits needed to be performed on a regular basis (see the 2021 Net Neutrality Report for details).

In the current reporting year, the regulatory authority sent questionnaires to four providers of zero-rating products (zero-rating options) in the context of requests for information. Further details are provided in section 4.2 and section 7.4. Nine other supervisory procedures were also initiated in response to domains blocked as a result of the EU Sanctions Regulation (Council Regulation (EU) 2022/350). A more detailed description is given in section 5 and section 7.5.

Alongside activities previously described as part of the stated procedures concerning existing products, general terms of business and fee provisions were also reviewed for compliance with the TSM Regulation pursuant to the authority's statutory role in reviewing contract terms (Art. 133 TKG 2021). With respect to the minimum content of contracts as required in Art. 4(1) of the TSM Regulation, in formal procedures no immediate steps, based on the TSM Regulation, needed to be taken in the reporting period. In the procedure concerning objections to general terms of business, the aim is to have non-conforming contract conditions amended before the conclusion of the procedure, so as to efficiently ensure the legal conformity of contract conditions.

7.1 Blocking of TCP/UDP ports or protocols

No new procedures addressing port blocking were initiated in the reporting period. Many such procedures have been completed in recent years. The technical reasons for blocking specific ports were clarified in most of these cases. Port blocking can be acceptable given sufficient legal justification.

At this juncture, it needs to be understood that an assessment of the legitimacy of port blocking activities always requires a case-by-case approach. Accordingly, the fact that one procedure has considered a port block in a specific scenario to be legitimate does not automatically infer the outcome of other assessments of port blocking that involve other ISPs.

When attempting to assess the proportionality of port blocking, useful guidance is provided in the guidelines published by ENISA on assessing security measures adopted pursuant to Art. 3(3) TSM Regulation.

The following section offers a summary of selected previous outcomes.

Port 22 (SSH)

One fixed network provider blocks this port for use by specific internet access technologies for technical reasons based on their network topology (CPE maintenance). The ISP honoured their commitment to replace the affected modem, which meant the block could be lifted.

TCP port 23 (Telnet)

One mobile provider confirmed blocking incoming traffic on TCP port 23. This action was justified by citing vulnerabilities in the hardware used by end users. The block was removed after replacing this hardware.

TCP port 25 (SMTP)

One mobile network provider and one fixed network provider stated that they block outgoing traffic on port 25. The key reason for such a block is to prevent a customer's computer from sending spam mail after becoming infected by malware. If the provider only assigns private IP addresses (via NAT) and a public IP address that is shared by many customers via NAT is blacklisted, all email from those customers could be blocked.

When assessed pursuant to point (b) of Art. 3(3) third subparagraph, this block was considered to be legitimate – as in previous procedures – since (pure) SMTP is a protocol frequently misused at retail level (for sending spam).

In the reporting period, another ISP was reported for setting up a block on port 25 for outgoing TCP traffic in a NAT context.

TCP/UDP port 53 incoming (DNS):

Three ISPs reported using this block to avoid the risks of DDoS amplification attacks and DNS spoofing. Two ISPs reported that use of these blocks was limited to end users with dynamic IPs.

TCP ports 67–69 bidirectional (DHCP, BOOTPS, TFTP)

One fixed network provider blocks this port for use by specific internet access technologies for technical reasons based on their network topology (CPE maintenance).

After a lengthy analysis, the block was considered legitimate pursuant to point (b) of Art. 3(3) third subparagraph in the absence of a less intrusive solution and since the TFTP protocol now has hardly any practical relevance for end users in terms of internet access.

TCP ports 137–139 bidirectional (NetBIOS)

One fixed network provider blocks this port range, arguing that within a WAN there is no use case for the Windows file and printer sharing services, which function via these ports. Simultaneously, opening these ports would also expose customers to considerable risk, since they are not experienced in handling these services. In the event of a customer misconfiguration, there would be a risk of unauthorised parties gaining access to their network shares.

Following an analysis based on point (b) of Art. 3(3) third subparagraph, these blocks were considered legitimate for incoming traffic.

TCP port 443 incoming (HTTPS)

One fixed network provider reported blocking incoming traffic on TCP port 443. This block could be lifted after migration to new hardware.

TCP port 445 incoming (SMB)

One fixed network provider blocks this port for incoming traffic on account of security concerns in relation to end users. In the case of the other fixed network provider, following an analysis based on point (b) of Art. 3(3) third subparagraph, these blocks were considered legitimate for incoming traffic.

TCP port 455 incoming (CreativePartnr)

One fixed network provider reported blocking this TCP port for maintenance reasons. The block has since been removed or is activated only in the event of maintenance.

TCP ports 10001, 10021, 10080 and 10081

One fixed network provider reported blocking these TCP ports for maintenance reasons. As this affected only a few modems and the ports are not in the 'common port' range, this block was considered to be justified based on point (b) of Art. 3(3) third subparagraph.

TCP port 8089

One MVNO requested an extension to allow time to replace affected hardware that sets up CPE maintenance connections via this port. This extension was granted due to the scope of replacement work.

7.2 Private IP addresses and services

The TSM Regulation grants end users the right to use and provide applications and services. A key technical prerequisite for the selfhosting of services is the direct accessibility from the internet of the server or service operated by the end user, and the assignment of a public IP address.

In mobile networks in particular, end users are occasionally assigned private IP addresses (using NAT). Apart from technical aspects, reasons for this include ISPs' interest in keeping public addresses in reserve, since – as with IPv4 – these could become scarce.¹⁹ However, if multiple end users are required to share a single private IP address via NAT, this effectively prohibits any individual customer from providing services or content themselves. The regulatory authority interprets Art. 3(1) as entitling the end user to at least one free public dynamic IP address – at least if the end user requests such an address, for example because of wishing to offer services. The end user can then utilise that address with dynamic DNS services to allow routing to their own services. Assigning a public IP address on condition of payment of an additional fee (defined for instance in a specific subscription model or as an added option) or only to certain customer segments (such as business customers) is unconditionally to be considered a breach of Art. 3(1).

On this topic, information obtained in the last reporting period has shown that end users occasionally receive incorrect information in response to enquiries made to their ISP and then contact the regulatory authority to clarify the current legal situation. A decision issued against a provider in April 2021 as a result of the nonallocation of (at least) a dynamic public IPv4 address to end users has since become final.

7.3 Disconnection of IP connections

Another practice limiting the right of end users to selfhost services is the automatic disconnection of internet connections (IP connections) typically after a short period of time.

It was common for some ISPs to disconnect their customers' data connections (IP connections) automatically after a certain period of time (usually 24 hours). No heed was given here to existing internet connections, in other words, the connection was always disconnected after this period, not only when it was idle. The reasons given here by the ISPs ranged from technical considerations relating to the assignment of IP addresses, to claims of effectiveness in protecting user privacy. This is a problematic measure, mainly because of reassigning dynamic public IP addresses – even when user devices are automatically reconnected. It can take from several minutes up to half an hour until a dynamic DNS service in use recognises the change in IP address and updates the clients. In effect, the frequency of disconnections constitutes a disproportionate restriction of end user rights under Art. 3(1) of the TSM Regulation.

In recent years, ISPs have become very well aware of the limits applicable to the justified disconnection of IP connections. Unsurprisingly, this was not a topic of any note in the current reporting period.

¹⁹ While fewer than 232 (approx. 4 billion) addresses are available using IPv4 and are now becoming scarce, IPv6 provides a little under 264 (approx. 18 trillion) subnets and therefore easily enough for the fore-seeable future.

7.4 Zero-rating

RTR investigates the impact of zero-rating on competition in general as well as on downstream markets in the internet value chain. In so doing, RTR analyses the transparency of the zero-rating product for service and content providers (i.e. those operating at the wholesale level) as well as price trends and key figures relating to product usage. Ultimately, a decision has to be made as to whether the freedom of end users to choose is being restricted or whether end users remain able to select other (non-zero-rated) services, and whether future innovations remain accessible to users so that the process of innovation is not unduly affected. The 2021 Net Neutrality Report has as one of its key topics the trends in zero-rating products appearing on the Austrian market in recent years.²⁰ As a result of the ECJ rulings on zero-rating in 2021, the current report only addresses key figures and changes that occurred in the reporting period.

During the reporting period, customers utilised zero-rating products provided by A1 Telekom Austria AG (within its core brand plus the associated brands Kurier mobil, Red Bull Mobile, Krone mobile, Yesss!, XOXO and Georg), Hutchison Drei Austria GmbH and T-Mobile Austria GmbH. In this reporting year, educom GmbH also first introduced its zero-rating product, which includes unequal treatment of pricing for data traffic to educational establishments.²¹

During the reporting period, A1 Telekom Austria AG (core brand), Hutchison Drei Austria GmbH and T-Mobile Austria GmbH further increased the proportion of customers with subscriptions including zero-rating, and therefore continued the growth in customer base for zero-rating observed to date. The share of customers with these subscriptions was only about 8 per cent in January 2021 but had risen to 13 per cent by January 2022. If the affiliate brands of A1 Telekom Austria AG and zero-rating options of providers are taken into account, then the proportion of customers with zero-rating products rises to 15 per cent as of January 2022.²²

The average zero-rated data volume consumed as part of tariff plans with zero-rating that are offered by A1 Telekom Austria AG (core brand), Hutchison Drei Austria GmbH and T-Mobile Austria GmbH rose from 1.5 GB to 2.0 GB in the period January 2021 to January 2022, with the amount of free data included in subscription packages also rising from 19 GB to 21 GB. The average volume of data consumed overall (regardless of the billing modality) remained at around 8 GB during this period.²³

For providers of internet access services and zero-rating products, the ECJ rulings also necessarily result in the elimination of a key product differentiator. This benefits MVNOs in particular, who, with the exception of provider educom GmbH, do not offer zero-rating products in Austria. Accordingly, the ultimate elimination of zero-rating should also affect the consumer market – a future market development that has yet to be observed.

²⁰ RTR, 2021 Net Neutrality Report, accessible from: <https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/netzneutralitaetsbericht/NNBericht2021.en.html>

²¹ As a result of its small customer base when compared with other providers of zero-rating products, the following section does not further consider the product from educom GmbH.

²² These figures are based on the number of end users having smartphone plans and data subscriptions offered by A1 Telekom Austria AG, Hutchison Drei Austria GmbH and T-Mobile Austria GmbH.

²³ These key figures are weighted by customer numbers. Source: RTR survey.

7.5 Network blocking

To safeguard net neutrality, the Net Neutrality Regulation prohibits ISPs from blocking net content. Only a very few exceptions are permitted here, such as when legislation specifically requires blocking. One example here is copyright law, which for 20 years has obliged ISPs to block access to websites that are intentionally structured to breach rules. In the past, this circumstance has led to various court cases involving ISPs and rights holders. Such cases regularly end up before national or European supreme courts. More recently, additional EU legislative instruments have required measures to limit the web content provided by various online agents. Examples include the Consumer Protection Cooperation Regulation²⁴ and the Market Surveillance Regulation.²⁵

The regulatory authority has been taking a closer look at network blocking for a number of years now. This stems from concerns that every network block compromises the core principle of net neutrality and potentially affects the right of internet users to freedom of expression, and also forces providers into the involuntary role of judges. The aim here must be to identify ways and means of maximising the legal protection and certainty enjoyed by all stakeholders. To this end, legislative activities at national and European level are closely observed, with the resulting insights actively applied when transposing EU-level provisions into national law.

Since 2018, the regulatory authority has conducted procedures in 29 cases involving network blocking. Here care has been given to ensure that any measures enacted comply with the Net Neutrality Regulation, i.e. by avoiding excessive interference with users' fundamental rights and by respecting the rights of other parties concerned, including ISPs and website operators. Of the total of 29 cases, 23 involved supervisory procedures, meaning ISPs had already set network blocks. The other six cases involved 'assessment' procedures, where ISPs had requested an assessment as to whether a network block was prohibited. The administrative decisions issued in such cases are ultimately brought to the attention of the Supreme Administrative Court, which for the first time ruled on the Net Neutrality Regulation (more details under Part I, section 2021).

Major activities in connection with network blocking include exchanging information with stakeholders, public relations and participation in legislative processes. For example, we have submitted numerous statements in review of draft legislation in recent years. In these reviews we have underscored the importance of free access to the open internet, and the technical challenges raised by network blocking. The regulatory authority is clearly aware of the completely new challenges arising as more and more daily activities are shifted to the internet, making it even more difficult and tedious for users to assert their rights. It needs to be emphasised, on the other hand, that network blocking is and must always be a last resort. Any excessive use would result in collateral damage and potentially jeopardise freedom of expression in a liberal society. After all, network blocking often entails the risk of 'overblocking'. An ISP only has a certain set of options for blocking online content, and these options often result in the blocking of not only illegal but also legal content. Accordingly, such measures should be used sparingly.

²⁴ Regulation (EU) 2017/2394 of 12 December 2017 on cooperation between national authorities responsible for the enforcement of consumer protection laws and repealing Regulation (EC) No 2006/2004, OJ 2017 L 345, p. 1.

²⁵ Regulation (EU) 2019/1020 of 20 June 2019 on market surveillance and compliance of products and amending Directive 2004/42/EC and Regulations (EC) No 765/2008 and (EU) No 305/2011, OJ 2019 L 169, p. 1.

As of March 2021, network blocks can now also be set in another context, as permitted by the EU Consumer Protection Cooperation (CPC) Regulation and accompanying Austrian legislation, the Consumer Protection Cooperation Act (VBKG). These rules are intended as an effective means of countering crossborder infringements of consumer rights. Numerous European authorities coordinate their efforts in this cause. Authorities can now file injunctions against companies that infringe upon consumer rights. Sometimes, however, companies cannot be directly prosecuted in an online context. This might be the case where a company is established outside the EU and does not respond to claims. In such cases, the online intermediaries can be held accountable for remedying infringements at internet level. This could potentially be any information society service, including access providers, host providers, caching providers, search engine providers or even domain registration services. These providers are then ordered to delete the unlawful online content or set a network block. In Austria, the TTK is the authority responsible for taking measures involving intermediary online service providers. Here, network blocks can only be set after review and authorisation by an authority. The corresponding procedure defined by the TTK is aimed at resolving challenges and deficits relating to network blocking that arose in the past. The procedure could serve as a model to be applied in other areas as well. Network blocks based on the CPC Regulation have not been implemented to date.

The EU Sanctions Regulation of March 2022 effectively created new blocking obligations for ISPs. In response to Russia's current actions destabilising the situation in Ukraine, Council Decision (CFSP) 2022/351 of 1 March 2022 and the EU Sanctions Regulation (Council Regulation (EU) 2022/350) of the same date imposed new restrictive measures against Russian media organisations participating in propaganda activities. The organisations affected by the sanctions are RT – Russia Today English, RT – Russia Today UK, RT – Russia Today Germany, RT – Russia Today France, RT – Russia Today Spanish, and Sputnik. The aim is to block the flow of information from these media channels within the EU.

In the opinion of the regulatory authorities responsible for safeguarding net neutrality, namely the TTK and RTR FB TKP, no further implementation of the EU Sanction Regulations is required through a national administrative act. As an EU Regulation, the law applies immediately in Austria and also governs providers of internet access services. The regulatory authorities consider the law to be an EU legislative act in the sense of Art. 3(3) subparagraph 3(a) TSM Regulation. Measures adopted by providers of internet access services in line with the accepted interpretation of the EU Sanctions Regulation therefore do not normally breach applicable laws aimed at safeguarding net neutrality.

In accordance with its adjudicatory practice, the TTK reviews the proportionality of all technical traffic management measures adopted to comply with special regulations. Providers have been requested to report the setup of network blocks to the regulatory authority promptly and in a format of their choosing, providing full details of the technical measures adopted and their probable impact on services in general.

Website blocking in the reporting period

In the period March to April 2022, the TTK initiated a total of nine procedures against ISPs who were presumed to have blocked access to certain websites in connection with the EU Sanctions Regulation. These procedures were still pending at the end of the reporting period (May 2021–April 2022).

7.6 VwGH on video-on-demand component at A1 TV (R 3/16)

In 2016, a supervisory procedure was initiated against A1 Telekom Austria AG as a result of its suspected breaches of net neutrality legislation. In its decision on R 3/16 issued on 18 December 2017, the TKK identified various breaches of Art. 3 of the TSM Regulation and stipulated the following corrective actions:

- Discontinuation of the prioritisation of the video-on-demand (VoD) component of 'A1 TV', within a period of three years.
- Discontinuation of IP connection disconnection after 24 hours by extending this connection duration to 31 calendar days, within a period of six months.
- Discontinuation of billing (sur)charges for the assignment of public IP addresses, within eight weeks. Followed by repayment of charges billed for this service since 30 April 2016, within a period of three months.

A1 petitioned the BVwG to review this decision.

In April 2020, the BVwG rejected the petition by A1 Telekom Austria AG as unjustified and granted the right to appeal this decision.²⁶ The Supreme Administrative Court also rejected the subsequent appeal from A1 Telekom Austria AG as unjustified.²⁷ This ruling is final.

The following section provides an overview of the key aspects of the procedure mentioned.

Specialised service

As part of a request-for-information procedure, it was found that one of the TV and video-on-demand services offered by A1 Telekom Austria AG via the bandwidth of the internet access service was prioritised. This means that when this service is active, the enduser device reserves a specified bandwidth, which is then no longer available for the internet access service. This posed the question as to whether such constituted a specialised service within the meaning of Art. 3(5), with regard to the VoD components (video library and 'catchup TV'). Subsequently, in the procedure in question pursuant to Art. 5(1) TSM Regulation, concerning Art. 3(5) as well as Par. 116 et seq. of the BEREC Guidelines, the issue of the technical need for optimisation (in terms of prioritisation) had to be clarified. A specialised service was assumed for the live IPTV components of the bundled product.

As part of the procedure, a technical and commercial evaluation report was commissioned, which after indepth analysis came to the conclusion that the video-on-demand service did not require data transfer prioritisation either for technical or business reasons (especially in view of substitutes on the internet). Among other things, A1 Telekom Austria AG argued in detail that the bundled product should be viewed as a whole, and that it was not permitted to unravel a bundle of services. These arguments could not be accepted because such an approach would allow providers to 'bundle' specialised and non-specialised services. The TKK therefore declared that, given the lack of a need for prioritisation, the VoD service did not fulfil the specialised services requirements and the prioritisation of this service should therefore be discontinued. The period set for discontinuing prioritisation was three years, since the service had been provided in this form before the TSM Regulation entered into force and (presumably) in accordance with laws prevailing at that time, while the TSM Regulation provides for no additional transitional periods and the technical changeover is a largescale endeavour for the ISP.

²⁶ BVwG 23 April 2020 W120 2183616-1/29E. Available (in German) at https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Bvwg&Dokumentnummer=BVWGT_20200423_W120_2183616_1_00

²⁷ VwGH 16 November 2021 Ro 2020/03/0017. Available (in German) at https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Vwgh&Dokumentnummer=JWT_2020030017_20211116J00

The BVwG agreed with the opinion expressed by the regulatory authority. There is no objective technical need to optimise the service in question in order to meet a level of quality that exceeds the level of quality met by non-‘prioritised’ data transmissions. This opinion was also shared by the Supreme Administrative Court.

Nor does the BVwG view the setting of a three-year period for discontinuation following the delivery of the decision in question, which requires the cessation of the unlawful circumstances on the part of A1 Telekom Austria AG, as itself unlawful, since A1 Telekom Austria AG did not contest the underlying reasons for setting this period or the period’s duration in its petition.

Disconnection of the IP connection after 24 hours

In the petitioned decision, the TKK stated that A1 Telekom Austria AG disconnected the IP connections of its users after 24 hours, regardless of whether or not data transmissions were currently taking place. If end users wished at some point to provide services themselves, this service provision capability would accordingly be interrupted every 24 hours. Even if a dynamic DNS service were to be used, this would result in a daily interruption of enduser service provision capability and therefore represent a restriction of rights granted to end users by Art. 3(1) TSM Regulation.

This view is shared by the BVwG. An IP connection is to be maintained for as long as possible and in particular for the operation of web servers for websites, blogs, smart home systems, IP alarm systems or IP camera systems, and is also relevant for online gaming.

A1 Mobile Dynamic IP

The TKK also stated that end users have the right to provide services pursuant to Art. 3(1) TSM Regulation. Agreements about commercial practices or technical features pursuant to Art. 3(2) TSM Regulation must not restrict the rights granted by Art. 3(1) TSM Regulation. In order to provide their own services or applications, the end user requires a public IPv4 address (as a minimum: a dynamic address) that this user is accordingly assigned by their ISP. For users who had concluded a contract for internet access services using the mobile telecommunications network operated by A1 Telekom Austria AG, A1 Telekom Austria AG requires these users to purchase the ‘A1 Mobile Dynamic IP’ option in order to be assigned such an address. This option is billed by A1 at EUR 2.28 monthly, in addition to the basic monthly fee for the internet access service. The TKK stipulated the discontinuation of billing (extra) fees for the assignment of public IP addresses, within eight weeks, followed by the repayment of charges billed for this service since 30 April 2016, within a period of three months.

The BVwG stated that end users can exercise the rights guaranteed by Art. 3(1) TSM Regulation only if a dynamic public IP address is made available to users. Accordingly, any agreement concerning the levying of an additional fee represents a restriction to the rights of the end user.

The assignment of a public IP address (as a minimum: a dynamic address) is a requirement that has to be met in order for an end user to be able to provide services and applications. In light of this fact – and unlike the resource of bandwidth, for example – the assignment of a dynamic public IP address is an essential requirement for end users to be able to exercise their rights to directly provide services and applications, as codified by Art. 3(1) TSM Regulation. Accordingly, the additional levying of a fee for the

exercising of a right guaranteed by Art. 3(1) TSM Regulation, as is the case here, namely for the opportunity to provide services and applications by the end user, constitutes a separate contractual fee for an enduser right codified by Art. 3(1) TSM Regulation. In the opinion of the BVwG, the technical conditions necessary for the exercising of the rights guaranteed by Art. 3(1) TSM Regulation must therefore already be included in the price agreed pursuant to Art. 3(2) for providing internet access. The order to repay any fees already charged to end users is equally lawful.

As the Supreme Administrative Court has since rejected the appeal by A1 Telekom Austria AG as unjustified, and therefore confirmed the ruling from the BVwG and the decision from the TKK, the decision has now become final.

7.7 Measures in accordance with Art. 5(1)

In the sixth reporting period (ending in April 2022), only one decision to ensure compliance was necessary. This was because dialogue was initiated with companies early on and discussions usually resulted in constructive solutions compliant with the TSM Regulation. Various request-for-information and supervisory procedures were initiated but then dropped without an order by official decision (e.g. because of the voluntary resolution of the issue by the ISP); such cases are not listed here. The regulatory authority nonetheless monitored compliance with the provisions of the Net Neutrality Regulation on an ongoing basis.

The decisions on measures issued in December 2017 and April 2021 (in R 3/16, R 5/17 and R 9/19) remain valid. The BVwG has in the meantime handed down a ruling on the appeal in R 3/16. The decision issued by the regulatory authority was confirmed on all points. A termination for R 5/17 was issued by the BVwG in April 2022, since the provider had withdrawn their complaint in response to the decision. The decision issued against another ISP in April 2021 has since become final (R 9/19).

Table 03: Procedures in accordance with Art. 5(1) TSM Regulation pending in reporting period

✓: final

Procedure	ISP	Brief description	Date of decision	Status
R 3/16	A1 Telekom Austria AG	<ul style="list-style-type: none"> Prohibition of prioritising a VoD service for lack of a specialised service, within 3 years Free assignment of public IPv4 at customer demand Increase in period for disconnect-ing IP connections from 24 hours to 31 days 	2017-12-18	✓
R 5/17	A1 Telekom Austria AG	Prohibition of applying traffic-shaping to an add-on package with zero-rated audio and video streaming services.	2017-12-18	✓
R 1/18	LIWEST Kabelmedien GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓

✓: final

Procedure	ISP	Brief description	Date of decision	Status
R 2/18	kabelplus GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓
R 3/18	Salzburg AG für Energie, Verkehr und Telekommunikation	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓
R 4/18	T-Mobile Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓
R 5/18	UPC Telekabel Wien GmbH, UPC Telekabel-Fernsehnetz Region Baden Betriebsgesellschaft m.b.H., T-Mobile Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓
R 8/18	Hutchison Drei Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓
R 9/18	A1 Telekom Austria AG	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2018-11-26	✓
R 1/19	kabelplus GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-04-12	✓
R 2/19	Salzburg AG für Energie, Verkehr und Telekommunikation	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-04-12	✓
R 3/19	Hutchison Drei Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-04-12	✓
R 4/19	A1 Telekom Austria AG	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-04-12	✓
R 5/19	LIWEST Kabelmedien GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-04-12	✓

✓: final

Procedure	ISP	Brief description	Date of decision	Status
R 6/19	UPC Telekabel Wien GmbH, UPC Telekabel-Fernsehnetz Region Baden Betriebsgesellschaft m.b.H., T-Mobile Austria GmbH, Lisa Film GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-04-12	✓
R 7/19	T-Mobile Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-07-08	✓
R 8/19	A1 Telekom Austria AG	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2019-10-22	✓
R 11/19	Hutchison Drei Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2020-03-17	✓
R 12/19	kabelplus GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2020-03-17	✓
R 13/19	T-Mobile Austria GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2020-03-17	✓
R 14/19	LIWEST Kabelmedien GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2020-03-17	✓
R 15/19	Kabelplus GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2020-06-23	✓
R 1/20	Mass Response GmbH	Supervisory procedure pursuant to Art. 5 TSM Regulation on the auditing of access blocks for certain websites due to injunction claims based on copyright. Procedure dropped; no breach of Art. 3 TSM Regulation identified.	2020-07-21	✓
R 9/19	Lycamobile Austria Ltd.	Supervisory procedure resulting from failing to assign (at least) a dynamic public IPv4 address to end users	2021-04-07	✓
R 1-9/22	Multiple providers of internet access services	Procedures pursuant to Art. 5 TSM Regulation assessing the admissibility of network blocks based on the EU Sanctions Regulation	Current	

7.8 Ensuring legally compliant terms of contract

With the TKG 2021, the TKK's task of ensuring that communications service providers' contractual terms and conditions (including general terms of service, service descriptions and tariff provisions) are legally compliant was transferred to RTR as of 1 November 2021. Providers must draw up contract terms and notify them to RTR in advance for review. RTR can reject the application of these contract terms to business transactions if the terms breach the provisions of telecommunications law or certain points of civil or consumer protection law. In particular, the net neutrality-relevant provisions of Art. 4 TSM Regulation are also checked, so as to ensure that these transparency provisions are observed in order to safeguard net neutrality.

In 2021, 402 procedures were carried out. This represents a significant increase from 333 such cases in the previous year. Among the reasons for this is that the new TKG 2021 has made various adjustments necessary, and that providers of interpersonal communications services (NIICS) are now also subject to reporting requirements. Numerous enquiries from both end users and providers were also handled on the subject of notifying or reviewing contractual conditions. Content reviews of terms and conditions focus not only on compliance with provisions of telecommunications law but also civil and consumer protection legislation. In detail, it became apparent in 2021 that more and more European and international undertakings are becoming active as providers on the Austrian market. In ensuring that contract terms comply with the law, the TKK – and since 1 November 2021 RTR – has been facing a new set of challenges, since some of these providers have only limited knowledge of the relevant substantive and procedural provisions of Austrian and EU law, and may also not have an adequate command of German as Austria's official language.

The TKK, and since 1 November 2021 RTR, has been primarily concerned with ensuring that telecoms make any necessary changes to contract terms early on during procedures, thus ensuring that legal compliance is established as soon as possible. In 2021, this goal was again achieved in almost all procedures, so that only one objection decision had to be issued against primacall GmbH in May 2021, for not providing information on the discount that end users receive when entering into a contract with a minimum contract term of 24 months. For telecoms customers, checking through contract terms in advance reduces their risk of needing to go to court to clarify the legality of individual clauses once the contract has already been signed. Such legal proceedings are also associated with a very high cost risk. At the same time, consumers are often unable to identify potentially unlawful clauses that are in fact unenforceable even though they have been agreed and included in the general terms of service. This practice of vetting contract conditions terms also makes an important contribution to fair competition between communications service providers while also preventing them from gaining a competitive edge by introducing unlawful terms. In terms of net neutrality breaches, this also ensures monitoring and thus an early warning system pursuant to Art. 3 TSM Regulation.

7.9 RTR conciliation procedures

Within the scope of conciliation procedures (Art. 122 TKG 2003), RTR's conciliation body processes requests of customers who do not agree with their ISP's level of performance or billing.

A noticeable drop has been seen in the number of complaints about the contractually agreed quality of internet access. The previous rise, observed during the period May 2020 to February 2021, was therefore probably attributable to the Covid crisis. At the time, the sudden (and often simultaneous) use of internet access for both work and school-related purposes severely tested the limits of internet access in some households. Presumably, the affected users have since taken the necessary actions and found solutions, perhaps by upgrading services.

The section below presents an overview of conciliation procedures arising from quality complaints (in most cases relating to contractual internet access speeds) over time, compared with the prior period.

Table 04: Conciliation procedures involving network quality

	05/19 to 04/20	05/20 to 04/21	05/21 to 04/22
Mobile network quality	100	162	118
Fixed network quality	32	85	54

As has been discussed in the last report, transparency in relation to the performance of mobile internet connections as contractually agreed/obligated and advertised continues to be problematic. However, some improvement has been seen in relation to the advertising of mobile internet access as a result of RTR’s powers to issue ordinances as granted by Art. 47 TKG 2021. The regulatory authority may issue an ordinance setting out a specific relationship between the maximum speeds as advertised and as estimated for mobile services.

Less satisfactory is the situation facing users who lack technical alternatives when the contractually agreed performance cannot in fact be rendered by the provider. Often, as here, a provider’s offer to terminate the contract free of charge and with immediate effect does not provide a satisfactory solution if there are no alternative products available locally that would meet the user’s requirements.

7.10 General requests

RTR’s Telecommunications and Postal Services Division also handled net neutrality enquiries outside the context of conciliation procedures. Specifically, there were enquiries regarding minimum content pursuant to Art. 4 TSM Regulation, forced disconnection of internet access, free choice of router and zero-rating. Beyond this, questions were also raised in relation to the right to request a public IP address. As a general point, providers are by and large in compliance with the law in relation to all these issues, and so these requests can be attributed partially to general interest and partially to misunderstandings arising from communications between providers and their customers.



08

Indicators of continuous availability of non-discriminatory IAS

08 Indicators of continuous availability of non-discriminatory IAS

Art. 5(1) of the Net Neutrality Regulation requires national regulatory authorities to ensure compliance with Art. 3 and Art. 4 and to promote the continued availability of non-discriminatory internet access services at levels of quality that reflect advances in technology.

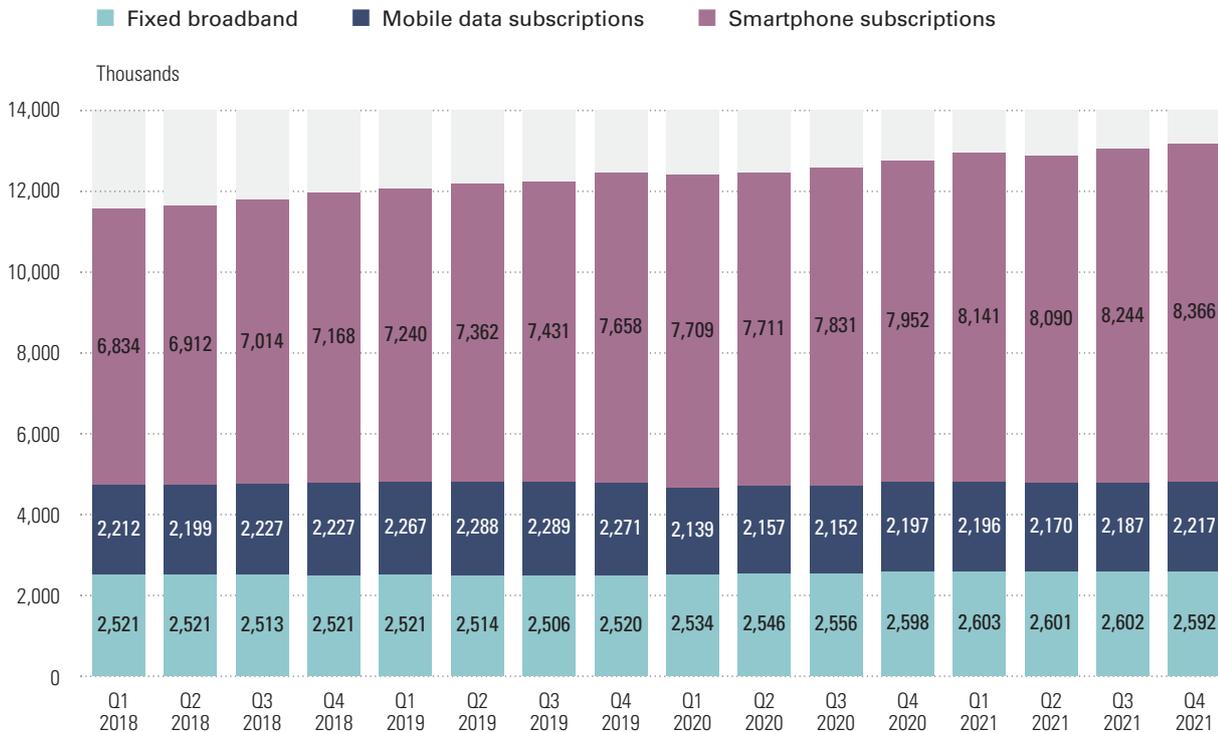
The following indicators²⁸ were used to assess whether availability of non-discriminatory internet access services (IAS) continued to be maintained at levels of quality that reflect advances in technology:

- Number of broadband connections
- Distribution of download and upload speeds in the reporting period
- Median of download and upload speeds and latency over time
- Distribution of download and upload speeds by hour of day
- Price baskets: fixed vs. mobile broadband
- Quality dimensions

Figure 3 shows the number of fixed and mobile broadband connections. Within mobile broadband, a distinction is made between mobile data subscriptions (without minutes and texts included) and smartphone subscriptions (with minutes and texts included). Between Q4 2020 and Q4 2021, the number of fixed broadband connections was around 2.6 million and therefore remained at a similar level. The number of mobile data subscriptions in this period also remained relatively constant at 2.2 million. In contrast, smartphone subscriptions rose by about 5 per cent. Smartphone subscriptions totalled 8.4 million in Q4 2021. Overall, the total number of connections rose by about 3 per cent, from roughly 12.7 million in Q4 2020 to 13.2 million in Q4 2021.

²⁸ Detailed analyses are available (in German) in the current RTR Internet Monitor <https://www.rtr.at/TKP/aktuelles/publikationen/Uebersichtseite.de.html?l=de&q=&t=category%3Dinternetmonitor>

Figure 03: Fixed and mobile broadband connections²⁹



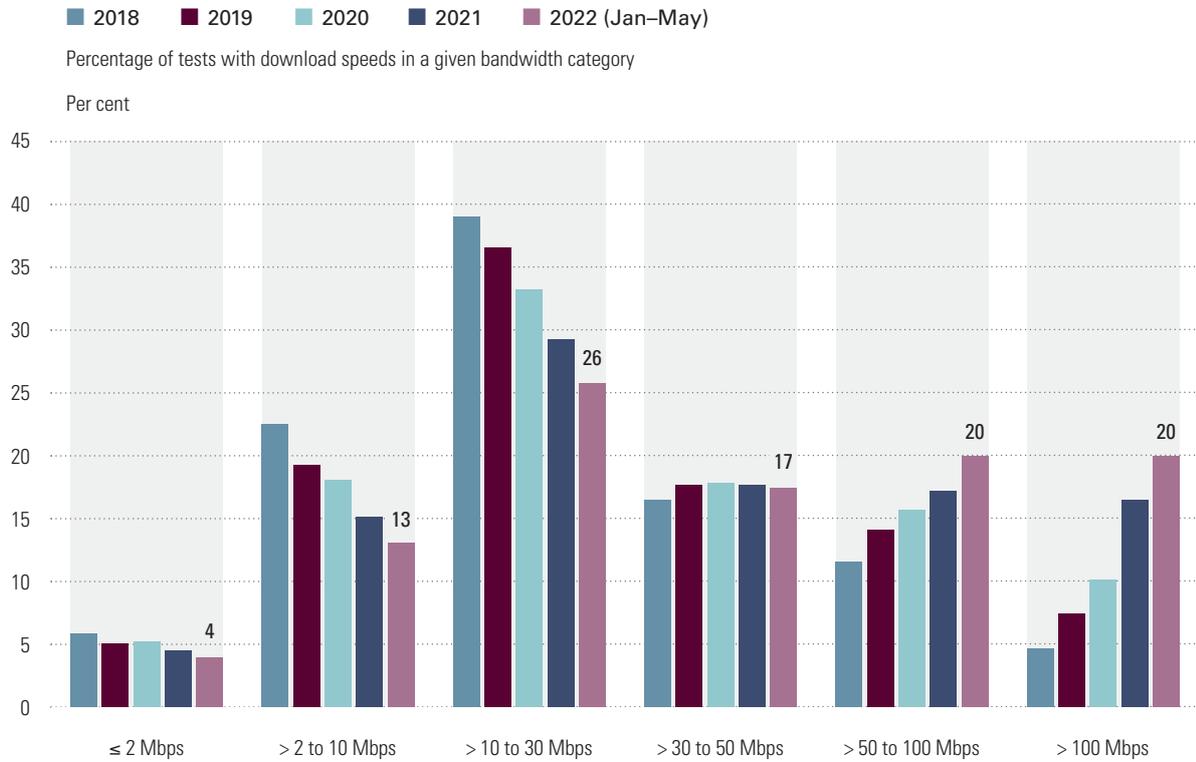
Source: RTR-KEV survey

Data generated by RTR-NetTest are used to assess quality as a metric for internet access.³⁰ The RTR-Net-Test allows users to check the speed and quality of their internet connection, reliably and independently of their provider.³¹ Figure 4 reveals the percentages of tests with download speeds in a given bandwidth category. In the reporting period 2021/2022, the category with the most measurements recorded was once again the category with download speeds between 10 and 30 Mbps. In 2022 (January to May), the proportion of measurements in this category was 26 per cent and continues to decline year on year, just as is the case for the category with download speeds between 2 and 10 Mbps. In the category with download speeds between 50 and 100 Mbps as well as more than 100 Mbps, the proportions of measurements have risen, continuing the trend seen in past years. In 2021, the majority of measurements (51%) were assignable to categories above 30 Mbps for the first time. This proportion was still around 44 per cent in 2020. When comparing proportions between 2021 and 2022 (January to May), the fastest growth is to be found in the category with download speeds of more than 100 Mbps. This category’s proportion grew by 4 percentage points to 20 per cent in 2022 (January to May).

²⁹ Data on broadband connections are collected quarterly in accordance with the Communications Survey Ordinance (KEV). M2M SIM cards are not shown in the chart. KEV data are available in the form of Open Data at: https://www.rtr.at/rtr/service/opendata/OD_Uebersicht.de.html

³⁰ The Open Data from the RTR-NetTest are available at <https://www.netztest.at/en/Opendata.html>.

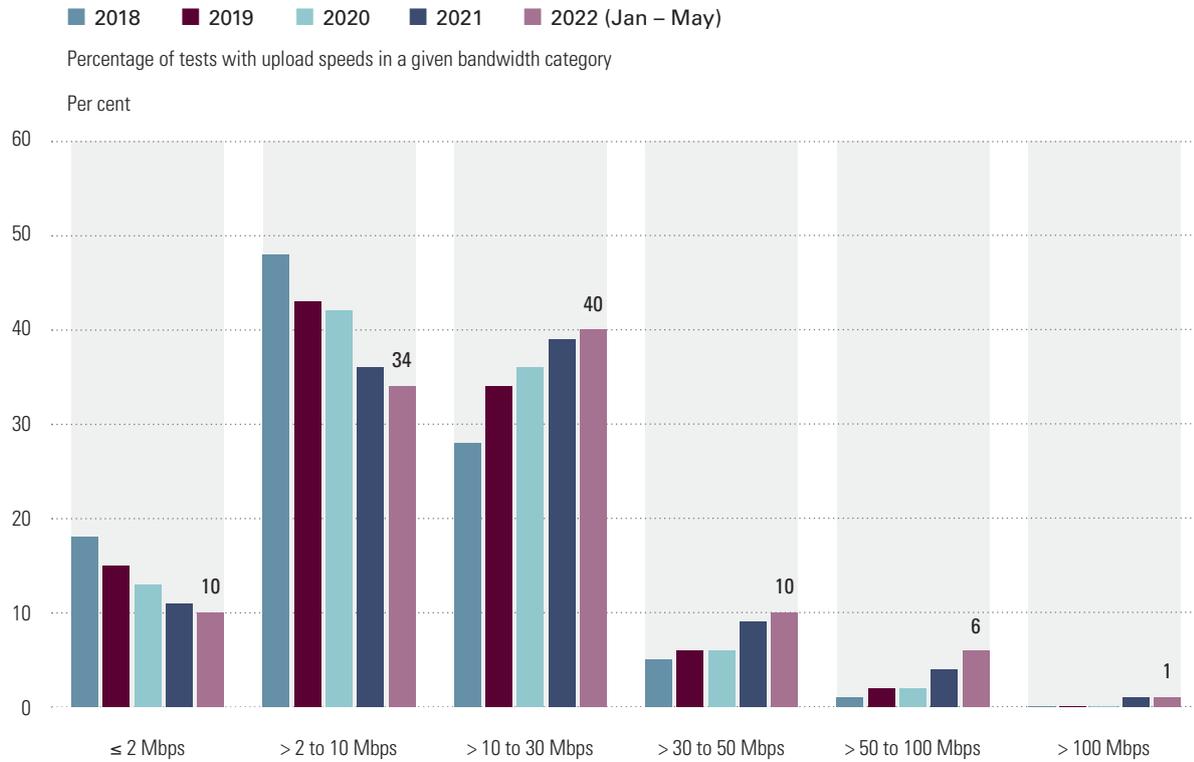
³¹ Available as a mobile app (Android, iOS) and as a browser test.

Figure 04: Distribution of download speeds over reporting period

Source: RTR-NetTest

Figure 5 depicts the ratios of tests with upload speeds in a given category. In the years to 2020, the highest proportions were recorded by the category with upload speeds between 2 and 10 Mbps. In 2021 and 2022 (January to May), however, most measurements could be assigned to the category with upload speeds between 10 and 30 Mbps. The proportions for the categories with upload speeds below 2 Mbps and between 10 and 30 Mbps also fell in 2021 and 2022 (January to May), and so continued trends seen in past years. Although most measurements (55%) could be assigned to these categories in 2020, their share of measurements in 2022 (January to May) was around 43 per cent.³² The percentage of tests with upload speeds greater than 100 Mbps is still very small, but has been consistently increasing since 2018.

³² Variations in the totals of proportions reported are a result of rounding differences.

Figure 05: Distribution of upload speeds over reporting period

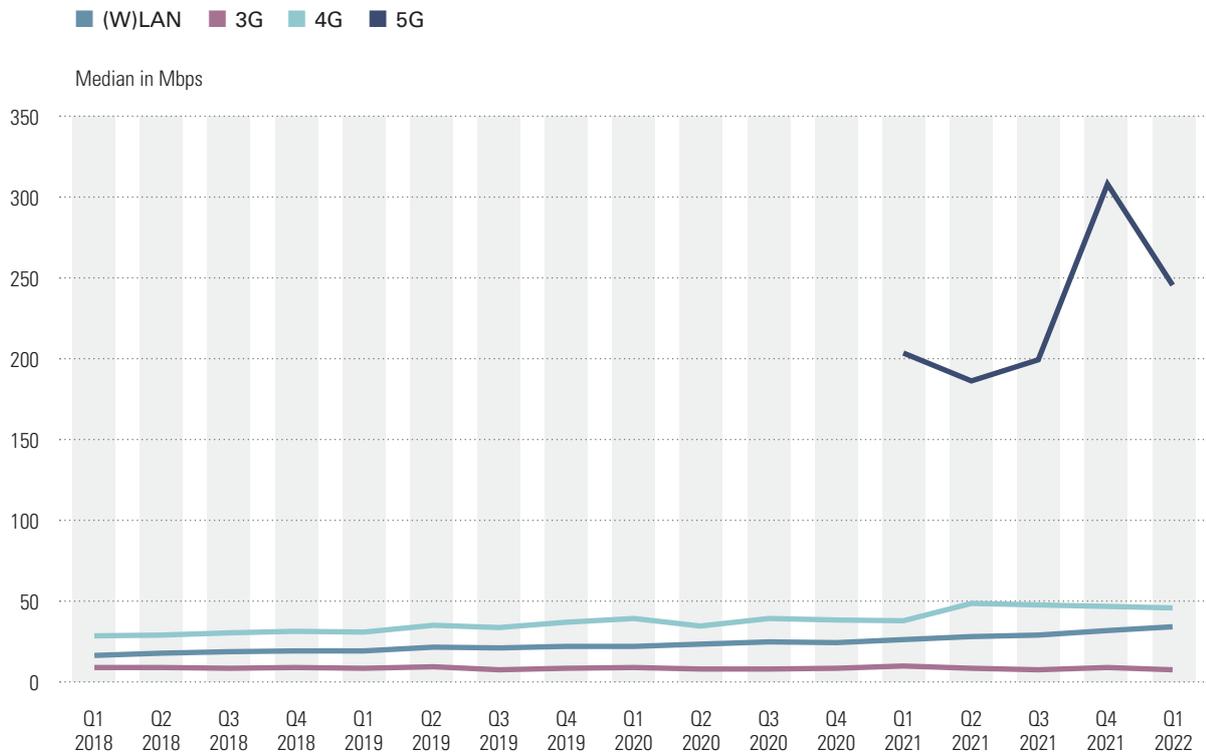
Source: RTR-NetTest

Figure 6 depicts the median download speeds measured with the RTR-NetTest over time, broken down by type of technology.³³ Distinctions are made between 3G (UMTS, HSPA), 4G (LTE), 5G (NR) as well as on the basis of measurements of various fixed and network technologies. These measurements were taken with the aid of a browser or app (for WiFi) and have been aggregated here under the heading of (W)LAN. The median for 5G connections is shown from the first quarter of 2021. As can be seen, significantly higher download speeds can be achieved with 5G compared with other mobile telecommunications standards and measurements over (wireless) LAN. The median of measurements taken with 5G was around 245 Mbps in Q1 2022. The median download speed with 4G has risen from around 38 Mbps in Q1 2021 to around 46 Mbps in Q1 2022. The median for measurements with 3G fell slightly over the same period from 10 to 7 Mbps.³⁴ In percentage terms, the median for measurements over (wireless) LAN showed the strongest growth, rising from 26 to 34 Mbps.

³³ The median is the value at the exact midpoint of a list sorted according to magnitude.

³⁴ The number of measurements with 3G is comparatively low in Q1 2022, at 2,000 tests. During the same period, around 46,000 measurements were conducted over 4G, 11,000 with 5G and around 253,000 over (wireless) LAN.

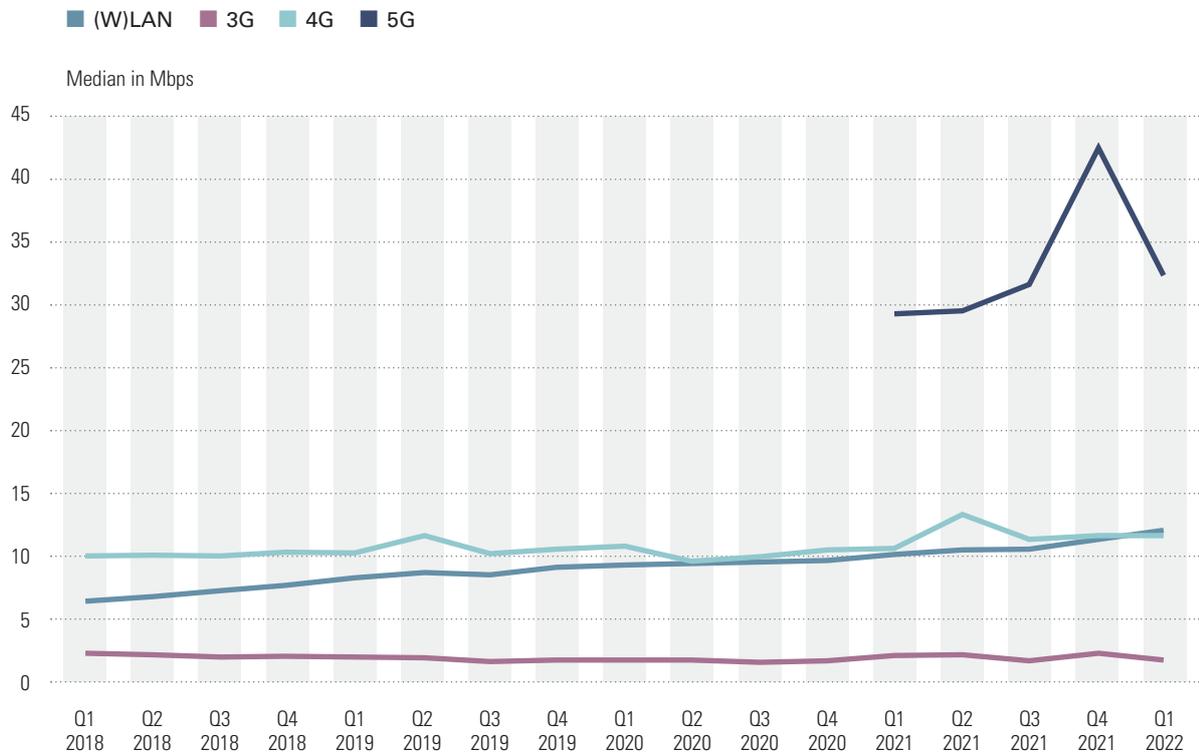
Figure 06: Download speed by technology



Source: RTR-NetTest

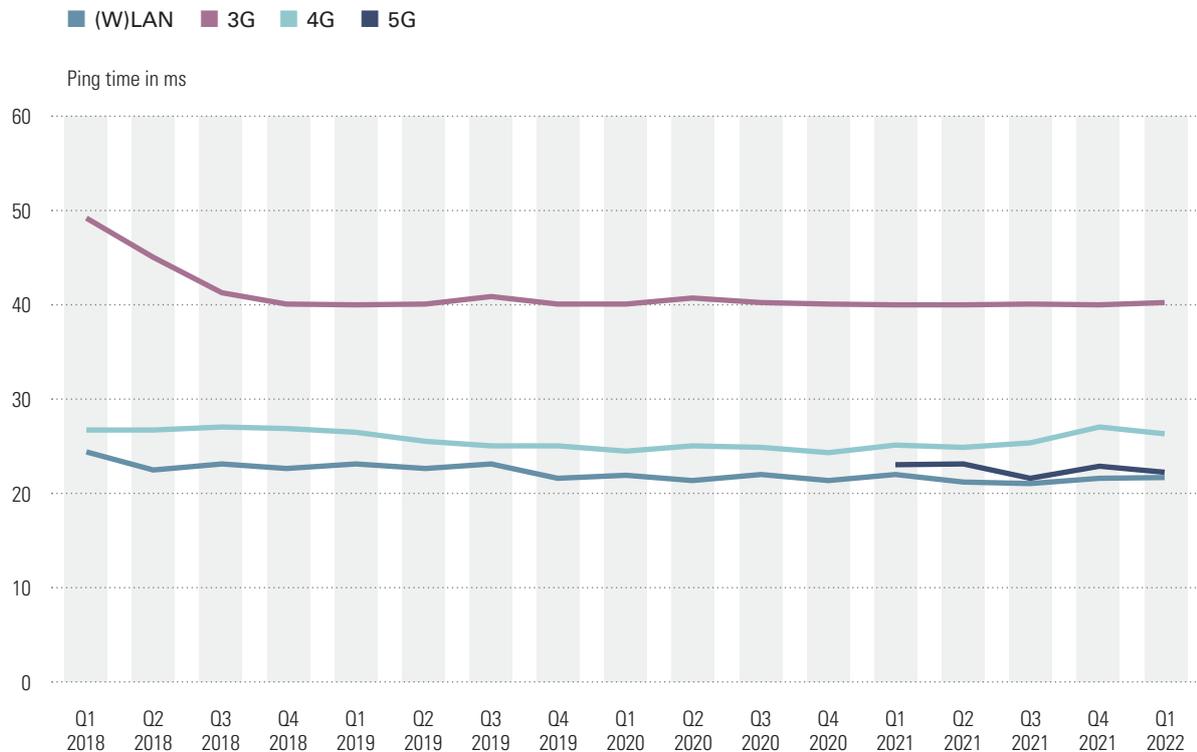
Figure 7 depicts the median upload speed measured with the RTR-NetTest over time, broken down by type of technology. As can be seen, 5G is capable of achieving significantly higher upload speeds than other mobile telecommunications standards and measurements over (wireless) LAN. The 5G upload median in Q1 2022 was around 32 Mbps. When comparing values between Q1 2021 and Q1 2022, measurements over (wireless) LAN exhibit a rise from 10 Mbps to 12 Mbps and therefore the strongest percentage rise among all technologies considered. Measurements over 4G also reveal a slight gain from 11 Mbps to 12 Mbps. Median upload speeds over 3G remain at a comparatively low level, on around 2 Mbps.

Figure 07: Upload speed by technology



Source: RTR-NetTest

Figure 8 depicts the median latency. The highest latencies occur in measurements over 3G. For 3G, median latency was around 40 ms in the period Q1 2021 to Q1 2022. While measurements over 4G exhibit lower latency, the median value rose marginally in this period from 25 ms to 26 ms. Measurements over 5G reveal a slightly lower latency than those over 4G. Median 5G latency fell from 23 ms in Q1 2021 to 22 ms in Q1 2022. The lowest latencies in Q1 2022 are found in measurements over (wireless) LAN, whose median remains at around 22 ms during this period.

Figure 08: Latency (ping) by technology

Source: RTR-NetTest

Figure 9 shows the median download and upload speeds by time of day in 2020, 2021 and 2022 (Jan. – May). The median download speed is lower in the hours between 6 pm and 10 pm than at other times of the day. The upload speed is barely affected during this period. The highest download speeds are found during nighttime hours (midnight to 6 am) and were around 51 Mbps on average during 2022 (January to May). As the ‘peak hour’ (8 pm to 9 pm) approaches, download speeds continue to fall, reaching only around 28 Mbps on average in the peak hour during 2022 (January to May). The median upload speed over the day as a whole was 13 Mbps on average during 2022 (January to May). The median download speed and median upload speed at each hour of the day were both higher than in the previous year, which is a positive development.

The number of measurements conducted by RTR-NetTest varies considerably during the course of one day. During 2019 to 2022 (January to May), most measurements were carried out in the hour between 7 pm and 8 pm. During 2021 about 85,000 measurements were made during this hour of the day. In 2020, the year when the first lockdowns were imposed in Austria in response to the coronavirus crisis and many companies switched to working from home,³⁵ more than 93,000 measurements took place in this same hour. In 2021, however, more tests were conducted at every time of the day when compared with the pre-pandemic year of 2019.

³⁵ For further information about changes in internet use, please see the 2020 Net Neutrality Report and the focus topic ‘Internet and the Covid crisis’. Available (in German) at <https://www.rtr.at/TKP/aktuelles/publikationen/publikationen/netzneutralitaetsbericht/NNBericht2020.en.html>

Figure 09: Download and upload speeds by time of day

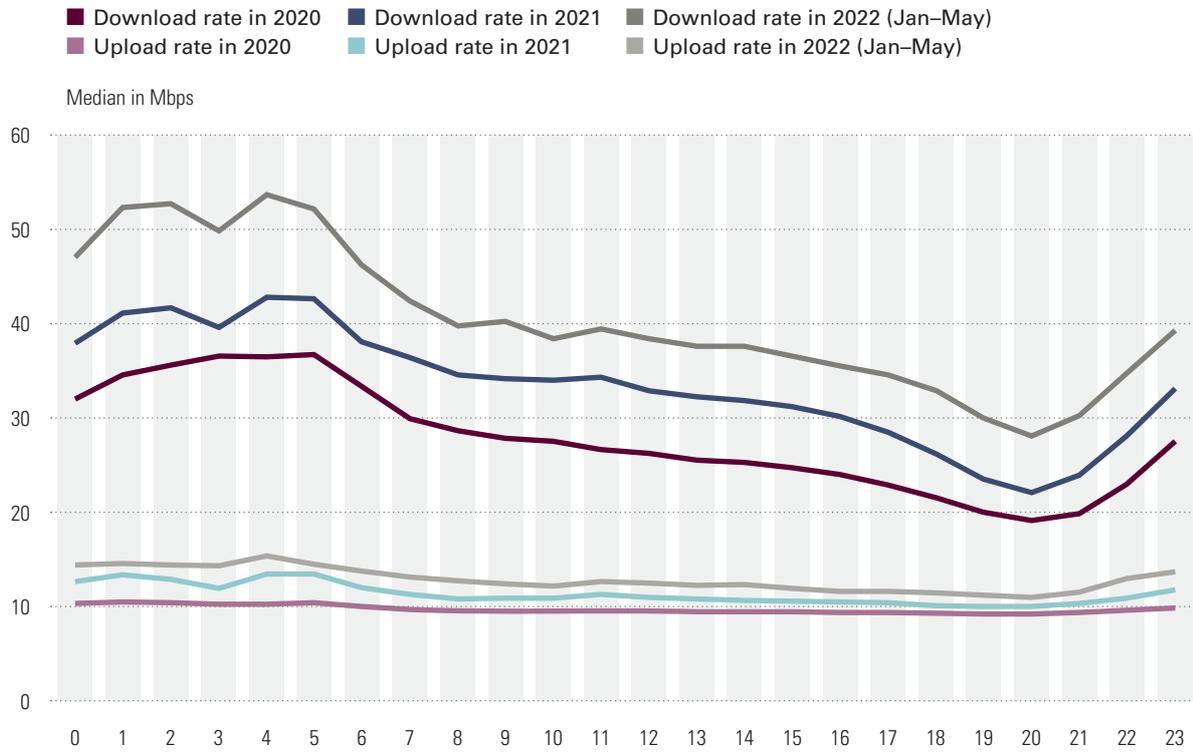
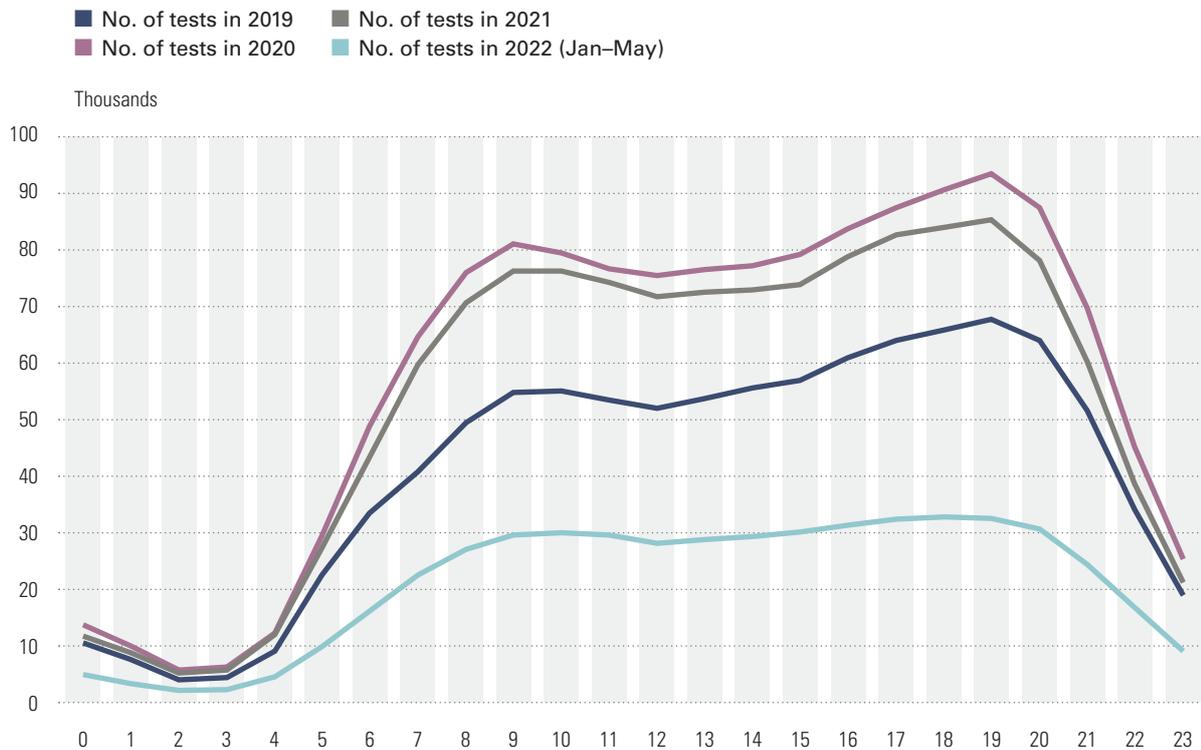


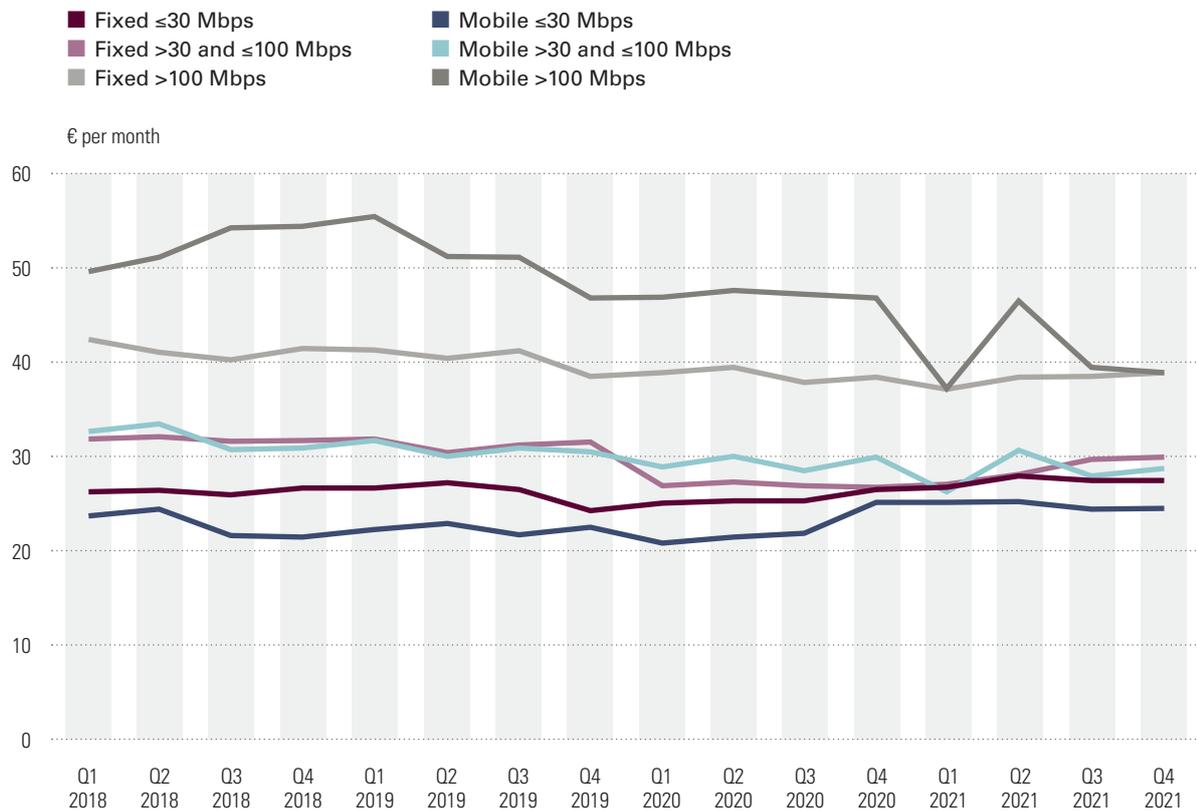
Figure 10: No. of tests by time of day



Source: RTR-NetTest

Finally, figure 11 contrasts the three price baskets for fixed network broadband (each without TV) with the three price baskets for mobile broadband (with unlimited data volume). The broadband categories differentiated in both cases are ≤ 30 Mbps, >30 to ≤ 100 Mbps, and >100 Mbps. The basket value is based on the least expensive product from each ISP that can be included in the respective basket (excluding subscription plans for young persons). In three of the four quarters in 2021, the price of mobile broadband with speeds of more than 100 Mbps first fell to a level similar to that for fixed broadband with speeds of more than 100 Mbps. At lower bandwidths (≤ 30 Mbps), prices for mobile broadband in the reporting period were once again cheaper than those for fixed broadband. While prices for mobile broadband in Q4 2021 fell in comparison with Q4 2020, prices for fixed broadband have risen. During this period, prices for fixed broadband (>30 to ≤ 100 Mbps) rose by the largest amount, from EUR 26.70 to EUR 29.90. The sharpest drop in price in this period was seen in mobile broadband (>100 Mbps) which fell from EUR 46.80 to EUR 38.90.

Figure 11: Price baskets – fixed vs. mobile broadband



Source: RTR

RTR-NetTest also gives consumers the chance to check their internet connection against other quality metrics as end users. By doing so, consumers obtain immediate results on quality of service (QoS) tests ('Voice over IP', 'Unmodified content', 'Website', 'Transparent connectivity', 'DNS', 'TCP ports', 'UDP ports'). In this way, consumers can evaluate the quality of their internet connection while also identifying any potential restrictions affecting their access.

Conclusions

The key figures as presented here indicate a basically positive development in the availability of non-discriminatory internet access services during the reporting period. Also on a positive note, download and upload speeds have seen further improvements in the reporting period. The median of 5G speed measurements is significantly higher than that of any other mobile telecommunications standard or of (wireless) LAN measurements. In view of the indicators above, it can be concluded that the availability of non-discriminatory internet access services at levels of quality that reflect advances in technology (requirement in Art. 5(1) TSM Regulation) was ensured in Austria during the reporting period.



09

Outlook

on further activities

09 Outlook on further activities

In our future work, we at the Austrian regulatory authority will continue to follow the approach taken in the past. Specifically, we are committed to proactively monitoring developments in the markets and being available as a partner to ISPs, internet users and all other stakeholders to consult on net neutrality issues. Optimal conditions for meeting this commitment have been created through new organisational structures put in place in late 2020, including a dedicated interdisciplinary 'Net Neutrality and Customer Contracts' team.

Specifically, the activities described below are currently planned for 2022/2023 or by the end of the next reporting period in April 2023.

I. Monitoring

- 1. Transparency investigation.** An investigation is planned in the coming reporting year to evaluate transparency status in relation to transmissions (whether traffic is modified). Further procedural steps should then be initiated in cases where there is evidence that data has been manipulated.
- 2. Requests for information.** As in previous years, the verification of internet access products by additional request-for-information procedures is also planned for the next reporting year.
- 3. Zero-rating.** Updated BEREC Guidelines will be published in mid-June 2022. The regulatory authority will take the steps necessary to safeguard net neutrality in Austria while allowing for these updated BEREC Guidelines.
- 4. Customer complaints as a source of information.** Customer complaints are viewed as a further source of information for ongoing monitoring of compliance with the provisions of the TSM Regulation. Any irregularities are to be followed up accordingly.
- 5. Ongoing review of general terms of business.** The regulatory authority's work reviewing general terms of business also involves checking to confirm compliance with net neutrality rules. The use of these terms is prohibited if they are found to breach the provisions of Art. 4(1) of the TSM Regulation. Where products touch on net neutrality issues (such as the provision of specialised services) to a significant extent, the regulatory authority will set up monitoring teams as appropriate.
- 6. Data from market observation and RTR-NetTest.** The regulatory authority periodically collects data (via the KEV, ZIB and ZIS) on aspects such as developments in telecommunications and internet access markets, the technologies implemented, infrastructure, and trends in demand and prices. These data are made available, together with related analyses (including hedonic prices, the mobile price index and geographical comparisons) as Open Data or in the form of quarterly reports (Internet Monitor, Telecoms Monitor). Another important system that is used to provide information about the structure and development of the internet is RTR-NetTest.³⁶ This crowd-sourced tool provides a wealth of increasingly reliable information on technologies and QoS indicators such as upload and download speeds, ping times and signal strength. RTR-NetTest is being developed on an ongoing basis.

³⁶ See <https://www.netztest.at/en/>

- 7. Certified monitoring mechanism.** A long-standing RTR measurement tool, RTR-NetTest was first deployed in conciliation procedures and court proceedings in November 2018, in order to furnish evidence for an ISP's compliance or lack of compliance with a contractually agreed service level. This is considered a type of certified monitoring mechanism within the meaning of Art. 4(4) of the TSM Regulation.
- 8. Network blocks are a topic of increasing significance.** In 2021, the TKK's remit was further expanded by the Cooperation of Consumer Protection Cooperation Act (VBKG), and basic blocking principles are also being duly considered in other areas of law (legislation to accompany the EU Market Surveillance Regulation). The regulatory authority expects to see network blocks receiving heightened attention because of the resulting need to weigh up one basic right against another, a factor also potentially impacting business models.
- 9. Empirical collections and analyses of platforms and digital gatekeepers.** While the Net Neutrality Regulation addresses questions of unhindered access to the open internet, the internet also faces risks beyond basic access that affect its status as a key driver of technical and social innovation. The RTR has prepared a series of analyses addressing these risks and is also working with other institutions such as the Federal Competition Authority (BWB) as part of the digital platforms task force. There has been a greater national and international focus on topics in this area since the publication of the draft Digital Market Act (DMA) by the European Commission in December 2020. The regulatory authority is concentrating efforts here on the continuous monitoring of developments in applications and groups of application within the Austrian market.

II. International cooperation

- 1. Updated Open Internet Guidelines.** A first important step was the adoption of the revised BEREC Net Neutrality Guidelines by the BEREC plenary assembly in June 2022.
- 2. To drive harmonised implementation of net neutrality provisions,** international exchange among regulatory authorities (within the framework of BEREC but also bilaterally) will continue in the form of ongoing procedures as well as the joint discussion and analysis of relevant products. Within this framework, the RTR Telecommunications and Postal Services Division also makes every effort to ensure the confidential handling of issues raised by domestic ISPs (e.g. relating to individual products) and the rapid clarification of ambiguities in the interpretation of net neutrality provisions at international level.
- 3. Internet measurement tool and net neutrality.** For 2022, the BEREC Work Programme 2022³⁷ envisages the continuation of activities involving the application of tools to measure quality and net neutrality in relation to internet access services and their use in a regulatory context. RTR, which has had a tool of this kind available for a long time now in the form of RTR-NetTest, is closely involved in these activities, as well as in the auditing and updating of methods for the measurement of quality parameters in VHC networks.

³⁷ See BEREC Work Programme 2022, section 2.4.1. Collaboration on net neutrality measurement tools and evolution of the regulatory assessment methodology, accessible from: https://berec.europa.eu/eng/document_register/subject_matter/berec/annual_work_programmes/10136-berec-work-programme-2022

- 4. BEREC annual report on net neutrality in Europe.** A BEREC report on implementing the TSM Regulation will be compiled and published towards the end of 2022. The report will be based on the net neutrality reports that are to be prepared by the NRAs by 30 June 2022 and on the BEREC data survey carried out in mid-2022.³⁸
- 5. Digital gatekeepers and the internet ecosystem.** Following a public consultation and the completion of a workshop series, BEREC published specific recommendations on the DMA in its report on the ex-ante regulation of digital gatekeepers in September 2021.³⁹ The DMA is intended to subject gatekeepers on key platform services to specific regulation under competition law. Political consensus on the DMA has now been achieved.⁴⁰ The RTR's Telecommunications and Postal Services Division also provides contributions to work examining the internet ecosystem, whose investigations focus on topics such as openness and competition. This work also addresses interactions between the various elements and the various actors within the internet ecosystem, and is planned to continue in the next reporting period.
- 6. International work fosters knowledge transfer.** Work at international level not only creates a space for dialogue and discussion of the issues at hand. It also offers the opportunity of following the work of other regulatory authorities on the topic of net neutrality, reviewing its relevance for Austria and adopting suitable approaches where appropriate. Topics currently of particular importance internationally include network slicing, quality differentiation, specialised services and – last but not least – the approaches taken by regulatory authorities in the case of network blocks.

III. Cooperation with ISPs and the general public

- 1. Cooperation is key.** The RTR Telecommunications and Postal Services Division will continue to pursue and further expand the strategy mentioned above in this section – namely to promptly and constructively discuss, as part of an open dialogue with the sector or individual companies, any new issues, as a means of identifying solutions. Essentially, this lays the groundwork for all regulatory activities relating to net neutrality, since in many cases any specific proposed activity must first be understood in detail before any recommendations can be made or any conclusions can be drawn that might relate to potential regulation.
- 2.** As was the case this year, due attention will also be paid to **further development of the net neutrality website** in the next reporting year.⁴¹ Alongside other activities, the Net Neutrality and Customer Contracts Team not only maintains a list of all decisions made by the national regulatory authority and the courts, but also a list of all active network blocks in Austria. This service is offered in the form of Open Data to internet users and providers.⁴²
- 3.** Finally, an **event** will also be organised to address **current net neutrality issues**. Further details of an event of this kind – planned for early 2023 – will be offered for comment as part of the budget consultation to be published later this year.

³⁸ https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/

³⁹ BEREC Report on the ex-ante regulation of digital gatekeepers, BoR (21) 131, accessible from: https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/10043-berec-report-on-the-ex-ante-regulation-of-digital-gatekeepers

⁴⁰ Council of Europe, Digital Markets Act (DMA): Agreement between Council and European Parliament, accessible from: <https://www.consilium.europa.eu/de/press/press-releases/2022/03/25/council-and-european-parliament-reach-agreement-on-the-digital-markets-act/>

⁴¹ For details see: https://www.rtr.at/TKP/was_wir_tun/telekommunikation/weitere-regulierungsthemen/netzneutralitaet/Netzneutralitaet.en.html

⁴² For details see: https://www.rtr.at/TKP/was_wir_tun/telekommunikation/weitere-regulierungsthemen/netzneutralitaet/Blockings.en.html



10

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10 Appendix

10.1 Mapping of the report to the structure of the guidelines

Here, as described above in the introduction, details are provided on how this report maps to the BEREC Guidelines. This is important first and foremost to allow international comparisons of the report. Par. 183 of the BEREC Guidelines describes which sections should be included in national reports on net neutrality. In the following table these points are mapped to the individual chapters of the report.

Table 05: Sections of this report as mapped to the BEREC Guidelines

Text of the BEREC Guidelines (Par. 183)	Section
“overall description of the national situation regarding compliance with the Regulation”	1 and 2
“description of the monitoring activities carried out by the NRA”	4, 5 and 7
“the number and types of complaints and infringements related to the Regulation”	7
“main results of surveys conducted in relation to supervising and enforcing the Regulation”	3 and 7
“main results and values retrieved from technical measurements and evaluations conducted in relation to supervising and enforcing the Regulation”	7 and 8
“an assessment of the continued availability of non-discriminatory IAS at levels of quality that reflect advances in technology”	8
“measures adopted/applied by NRAs pursuant to Article 5(1)”	7.7

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10.3 Abbreviations

AGB:	general terms and conditions
BEREC:	Body of European Regulators for Electronic Communications
BOOTPS:	bootstrap protocol, serves to assign an IP address and other parameters to a computer in a TCP/IP network
BVwG:	Federal Administrative Court
CAP:	content and application provider
CDN:	content delivery network
CPE:	customer premises equipment (user device)
CreativePartnr:	service via port 455/TCP
DHCP:	Dynamic Host Configuration Protocol. This protocol allows a server to assign the network configuration to clients.
DNS:	domain name system
GDPR:	General Data Protection Regulation
EC:	European Commission
HTTPS:	Hypertext Transfer Protocol Secure; communications protocol on the World Wide Web that allows data to be transferred securely
IAS:	internet access service
IP:	internet protocol
IPv4:	internet protocol version 4
IPv6:	internet protocol version 6
ISP:	internet service provider
KEV:	Communications Survey Ordinance (Kommunikations-Erhebungs-Verordnung)
KommAustria:	Austrian Communications Authority
MNO:	mobile network operator
MVNO:	mobile virtual network operator
NAT:	network address translation
NetBIOS:	Network Basic Input Output System; an application programming interface (API) for communication between two programs via a local network
NN:	net neutrality
NRA:	national regulatory authority

RTR:	Austrian Regulatory Authority for Broadcasting and Telecommunications
SSH:	Secure Shell; refers to a network protocol and corresponding program, used to securely establish an encrypted network connection with a remote device
SMB:	Server Message Block; also known as Common Internet File System (CIFS), is a network protocol for file, printing and other server services in computer networks
SMTP:	simple mail transfer protocol
SNI:	see TLS-SNI
TCP:	Transmission Control Protocol
TFTP:	Trivial File Transfer Protocol; very simple (and early) file transfer protocol
TKG:	Telecommunications Act
TKK:	Telekom-Control-Kommission
TLS-SNI:	Transport Layer Security – Server Name Indication; an extension of the transport layer security protocol that allows multiple encrypted, retrievable websites with different domains to share one server on TLS port 443, even if it has only one IP address
TSM Regulation:	Telecoms Single Market Regulation; 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.
UDP:	User Datagram Protocol; a minimal, connectionless network protocol that is part of the transport layer of the internet protocol family
UrhG:	Federal Act on Copyright in Literary and Artistic Works and Related Rights (Urheberrechtsgesetz)
VIX:	Vienna Internet eXchange
VoD:	video on demand
WAN:	wide area network

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