



2 SEPTEMBER 2019

Response to BEREC call for input on regulation and the 5G ecosystem

Introduction

DIGITALEUROPE is pleased to provide its comments on BEREC's call for input concerning the impact of 5G on regulation and the role of regulation in enabling the 5G ecosystem.

We appreciate BEREC's role in supporting 5G deployment and comprehensive analysis provided in the table. At the same time, we are wary of the many existing overlaps and possible areas of additional regulation looking at the same issues, as this could create legal uncertainty and hamper innovation in the EU.

As we point out in the below responses, should potential concerns materialise with the actual deployment of 5G networks and services, existing laws already provide the appropriate legal basis. For the time being, we recommend the analysis should be focused on possible areas of regulation and policy that could hinder 5G and where BEREC and national regulatory authorities (NRAs) can take helpful action to foster deployment.

In areas that are not BEREC's core competence, we believe BEREC's work would be most valuable as contribution to the work of other competent authorities such as ENISA, data protection or competition authorities.

We provide detailed comments in the following sections, reflecting the different sections that appear in the Annex to the call.¹

¹ https://berec.europa.eu/eng/document_register/subject_matter/berec/download/1/8697-call-for-inputs-on-views-on-the-impact-o_1.docx



Table of contents

Introduction	1
Table of contents	2
Enhanced Mobile Broadband (end-user perspective)	3
Privacy	3
Security	3
Competition at retail level – operators and services	3
Quality of service	4
Consumer protection	4
Coverage maps.....	4
Labelling.....	5
Misinformation – health effects of EMF	5
Massive Machine Type Communications and Ultra-reliable & Low latency communications – verticals perspective	5
Privacy	5
New business models and intermediary operators	6
Bottlenecks, dominance and monopolies	6
Enabling new models.....	6
Network slicing and net neutrality	6
Quality of Service – cross-border issues	7
Numbering	7
IoT/M2M-related numbering (E.164)	7
Mobile Network Codes (E.212).....	7
Security	8
Interoperability	8
Different players, vendor lock-in	8
Societal perspectives from various use cases	8
Rollout	8
Roaming agreements	8
Planning	9
EMF.....	9
Small cells.....	9
State aid, coverage obligations	9
Security	10
Infrastructure sharing.....	10
Backhaul	10
Convergence.....	10



Enhanced Mobile Broadband (end-user perspective)

We'd like to ask BEREC to clarify the following definitions as used in the table:

- ▶ End-user: Does this include residential, business and application and content providers?
- ▶ Enhanced mobile broadband (eMBB): Does this refer to 5G standards or is it used to denote higher speeds (or greater data bandwidth) compared to 3G and 4G networks in a more general way?

Privacy

Like other wireless services, 5G offerings and the applications that use them may implicate end-user privacy, and all providers should take account of relevant legal requirements and best practices. We do not believe, however, that a BEREC study in this area would add value, considering the extensive institutions in place for privacy regulation and that this subject is outside NRAs' traditional remit and competencies. Similarly, we think that an analysis of data portability would go beyond BEREC's remit.

Supervision and enforcement of the GDPR rest with national data protection authorities (DPAs) and the European Data Protection Board (EDPB) and we see no specific angle to this discussion linked to 5G technology and networks.

Security

With respect to 5G, specific work on cybersecurity is already underway as outlined in recommendations published by the European Commission.² This complements obligations and actions established under the telecoms framework (including the ePrivacy Directive) and the NIS Directive.³

While BEREC's telecoms expertise and support to the other competent authorities in this field is crucial, we see no clear need for additional studies and measures in this area.

Competition at retail level – operators and services

Retail-level competition is not specific to 5G. We are concerned by the description contained in the table, which seems to consider it as inherently negative that gigabit speeds enabled by 5G and other technologies can impact end-users' operator choice, whereas in fact this contributes as a significant incentive for operators to invest in 5G and Very High Capacity Networks.

² Commission Recommendation (EU) 2019/534 of 26 March 2019 Cybersecurity of 5G networks

³ Directive 2002/58/EC, as amended by Directive 2009/136/EC

Assessments of convergence and competition at the retail level should remain primarily subject to the corresponding national market analyses, according to the existing legal framework and while taking account of the specific local economic and legal circumstances.

Quality of service

Transparency on quality of service (QoS) is not only relevant for 5G but is equally important for any kind of electronic communications networks. ECN providers already fall under detailed transparency obligations, based on the Open Internet Access Regulation and ultimately the European Electronic Communications Code (EECC).⁴ These requirements will equally apply to services provided over 5G networks.

Again, we are concerned that the ability to offer more QoS-differentiated services is inherently described a risk rather than an opportunity for operators and end-users alike.

The new EECC (Arts. 102-104) sets out strong transparency and information requirements related to QoS. BEREC is tasked with producing Guidelines on QoS parameters by June 2020. NRAs should assess the EECC's implementation and gather relevant data before taking further actions under the assumption that information must be improved.

For further comments, please see section on 'labelling' below.

Consumer protection

Coverage maps

DIGITALEUROPE agrees that transparency about coverage can be an important factor in providing information to end-users and drive investment. Most operators already provide maps on a voluntary basis to present an indication about likely network performance at specific places.

Due to the shared-medium characteristics of mobile networks, performance strongly depends on the specific location and network usage at a specific point in time. These maps typically indicate calculated speeds. Coverage maps can be complemented by information obtained through drive tests or measurement apps freely available to users allowing individual measurements. Coverage maps that illustrate available speed should not be confused with maps that indicate speeds that have been individually measured and only indicate the speed available in the individual subscription.

The definition and publication of coverage information should be consistent with the national requirements and mechanisms set by the NRAs. Moreover, the EU-funded

⁴ Regulation (EU) 2015/2120 and Directive (EU) 2018/1972, respectively

project for mapping of broadband services in Europe is already addressing coverage maps for EU.⁵

Labelling

The EECC does not mandate further specification of information requirements and how to present them. While we agree that more differentiations will be possible with 5G, we currently do not believe that such developments are sufficiently advanced to justify specifying or adding information requirements, including how they have to be presented. The recently adopted EECC as well as the Open Internet Access Regulation include detailed information requirements on QoS which are also applicable to ECS based on 5G.

We note that BEREC is in the process of reviewing its Net Neutrality Guidelines, and that process provides an appropriate and timely forum for addressing these issues.

Misinformation – health effects of EMF

DIGITALEUROPE strongly supports BEREC's initiative to provide consistent positions and fight end-user misinformation regarding EMF health effects in the context of 5G and mobile technologies in general.

Misinformation on EMF has been fuelling unjustified concerns while negatively impacting network rollout in Europe. BEREC, together and in coordination with the NRAs (and the appropriate national authorities/ministries), should proactively support consistent science- and evidence-based communication on 5G and EMF at EU and national/local level, in line with the internationally accepted recommendations of WHO/ICNIRP.

A BEREC-coordinated campaign on EMF-related issues should aim at a better understanding of the compliance of general public exposure to radiofrequency limit values and removing artificial barriers in the rollout of 5G networks.



Massive Machine Type Communications and Ultra-reliable & Low latency communications – verticals perspective

Privacy

We warmly welcome this proposed work stream. The proposed ePrivacy Regulation, in the texts currently being debated, creates not only considerable uncertainty regarding the application of its provisions but also, as highlighted in the Annex to this call for inputs, an

⁵ <https://ec.europa.eu/digital-single-market/en/broadband-and-infrastructure-mapping-project>

objective impossibility for business-to-business (B2B) and business-to-business-to-customer” (B2B2C) players in the value chain in obtaining end-user consent.

A detailed analysis of the impact of Arts. 6 and 8 of the ePrivacy proposal, as well as their consistency with the General Data Protection Regulation (GDPR), is needed. We think that BEREC’s specific telecoms expertise would greatly contribute to a correct understanding of the application of data protection and privacy law in this space.

New business models and intermediary operators

Bottlenecks, dominance and monopolies

We find the scope of this proposed work stream to be unclear and go far beyond ECN and ECS.

It is important that broad questions related to the data economy and its impact on competition are managed by competent authorities in a coherent manner. Many types of regulatory authorities – competition, market and consumer protection in addition to BEREC members – are taking interest in these issues, and this may lead to considerable regulatory overlaps. To ensure coherence, we call on BEREC and its members to focus on competition in telecoms markets specifically. Broader market dynamics should remain the purview of competition authorities.⁶

Enabling new models

Connectivity is becoming increasingly important for a wide range of services and applications, which requires support for a variety of cooperation models. Options for spectrum sharing and appropriate authorisation regimes should be explored.⁷

The RSPG is already conducting work and facilitating good practice exchange on spectrum sharing models as well as on authorization regimes. Any BEREC activity in this area should be coordinated with the RSPG.

Network slicing and net neutrality

We believe an examination of actual experience with network slicing deployments is premature given that network slicing is not significantly deployed in Europe or elsewhere. BEREC should instead focus on creating legal certainty around the ability to cater to enterprise and vertical connectivity and service needs. As noted, BEREC is in the

⁶ See our response to BEREC’s public consultation on the data economy, available at <https://www.digitaleurope.org/wp/wp-content/uploads/2018/12/DIGITALEUROPE-response-to-BEREC-data-economy-consultation.pdf>

⁷ See our response to the RSPG’s public consultation on a strategic spectrum roadmap towards 5G for Europe, available at https://circabc.europa.eu/sd/a/c33feba7-cd9a-4760-863e-0079e2228c6a/responses_2nd_opinion_5G.zip

process of reviewing its Net Neutrality Guidelines, which provides the appropriate forum for addressing these issues.

Quality of Service – cross-border issues

We believe this proposed work stream is not about QoS but rather about service availability and continuity.

QoS obligations and contractual requirements should be established and enforced in the jurisdiction where the contract was signed.

Numbering

IoT/M2M-related numbering (E.164)

Generating information on number demand development is a precondition to ensure number availability for market development.

Direct assignments to non-ECN/ECS entities should be very carefully considered given the related complexity and impacts on efficient public networks. The bulk of M2M connections are not likely to require numbers and other issues such as IPv6 transition might be more pertinent.

Discussions on this topic are ongoing in BEREC's consultation on its Guidelines on common criteria for the assessment of the ability of undertakings other than ECN or ECS to manage numbering resources and the risk of exhaustion of numbering resources if numbers are assigned to such undertakings.

Mobile Network Codes (E.212)

Although 5G development does not directly suggest allocation of Mobile Network Codes (MNCs) to verticals and intermediary operators, we agree with BEREC that '[r]egulation should ensure that sufficient national MNCs are available' for diverse and new use cases, especially to ensure cross-border services.

We further believe that the remote provisioning of eSIMs, with service provider support, is an efficient and low-cost way of securing the ability to switch connectivity providers for IoT connected devices. The use of a remote provisioning capability enables selection of a connectivity partner at a later stage in the product lifecycle and facilitates switching between connectivity providers.

Discussions on this topic are ongoing in BEREC's consultation on its Guidelines on common criteria for the assessment of the ability of undertakings other than ECN or ECS to manage numbering resources and the risk of exhaustion of numbering resources if numbers are assigned to such undertakings.

Security

Please refer to our comments under the Enhanced Mobile Broadband – Security section above.

In addition, specific requirements for verticals can be considered for the development of cybersecurity certification schemes developed by ENISA based on the Cybersecurity Act.⁸

Interoperability

Different players, vendor lock-in

We find the scope of this proposed work stream unclear. It mentions lock-in as its heading but in the example and deliverable refers to QoS and interoperability. See our comments to the ‘Quality of Service – cross-border issues’ section above.

Societal perspectives from various use cases

Interoperability of traffic safety information is already dealt with in ETSI⁹ and 3GPP.¹⁰ We do not believe that a BEREC study in this area would add value, also considering that this subject is outside NRAs traditional remit and competencies.



Rollout

Roaming agreements

DIGITALEUROPE supports a balanced approach between individual licensing and national roaming that favours investment in networks. National roaming agreements should be carefully assessed from an efficiency perspective and remain limited both in duration and scope for effective spectrum usage and network rollout.

Any regulation should stay technology agnostic. There should not be any 5G-specific roaming scenarios.

⁸ Regulation (EU) 2019/881

⁹ <https://www.etsi.org/technologies/automotive-intelligent-transport>

¹⁰ <https://www.3gpp.org/release-14>

Planning

Enabling the full potential of 5G will require extensive rollout of services, not only to the locations relevant to traditional mobile broadband but also to locations serving additional industry sectors. Enabling such rollout may involve new business models.¹¹

In common with our approach to all forms of connectivity, we believe that regulation for 5G should be pro-innovation and light touch. Relevant issues for regulatory consideration include:

- ▶ Simplified and streamlined deployment rules for small cells;
- ▶ Spectrum sharing;¹²
- ▶ Unified networks for all ‘haul’ options (fronthaul, midhaul and backhaul);
- ▶ EMF requirements, including unification of consistent, science-based protection levels; and
- ▶ Infrastructure sharing, enabling cost savings while promoting rather than limiting competition at the infrastructure level.

EMF

Please refer to our comments to section ‘Misinformation – health effects of EMF’ above.

Small cells

As noted above, we welcome this proposed work stream. As stated in the Annex, the benefit of a BEREC study should be assessed after publication of the European Commission’s implementing act, which is expected by June 2020 at the latest.

State aid, coverage obligations

State-aid rules should stay technology agnostic and are the responsibility of the European Commission.¹³ In this respect, we do welcome a review to the state aid guidelines to update them in line with the EU’s 2025 broadband targets and the EECC. We believe BEREC has an important role to play as an adviser to the European Commission.

¹¹ See our response to the RSPG’s public consultation on a strategic spectrum roadmap towards 5G for Europe, available at https://circabc.europa.eu/sd/a/c33feba7-cd9a-4760-863e-0079e2228c6a/responses_2nd_opinion_5G.zip

¹² See DIGITALEUROPE Views on 5G Licensing and Authorisation, available at [https://www.digitaleurope.org/wp/wp-content/uploads/2019/01/DIGITALEUROPE%20Views%20on%20Licensing%20and%20Authorisation%20to%20wards%205G%20\(final\).pdf](https://www.digitaleurope.org/wp/wp-content/uploads/2019/01/DIGITALEUROPE%20Views%20on%20Licensing%20and%20Authorisation%20to%20wards%205G%20(final).pdf)

¹³ <https://ec.europa.eu/digital-single-market/en/state-aid>

Security

Please refer to our comments under the Enhanced Mobile Broadband – Security section above.

Infrastructure sharing

All voluntary forms of sharing are welcome in principle. Passive infrastructure sharing (e.g. sites) is a good way to improve mobile connectivity, and regulation should rethink ways to help reduce rental costs and speed up permit approvals to keep up with increased demand from population-dense cities.

We welcome further work by BEREC and NRAs to support:

- ▶▶ Private infrastructure sharing agreements without favouring one model over another (passive/active infrastructure sharing models);
- ▶▶ Private network sharing practices; and
- ▶▶ Unified networks for all ‘haul’ options (fronthaul, midhaul and backhaul).

We urge, however, that infrastructure sharing should remain subject to market forces.

Backhaul

Rather than focusing purely on backhaul, we urge BEREC to consider renaming this work stream ‘anyhaul’ to consider all ‘haul’ options (fronthaul, midhaul and backhaul).

Convergence

Full 5G TV broadcasting won’t form part of the initial 5G network offering, with the design of a 5G-native eMBMS broadcast mode. This work is being jointly conducted by network manufacturers, broadcasters and operators.

This topic is premature for any specific actions.

FOR MORE INFORMATION, PLEASE CONTACT:



Alberto Di Felice

Senior Policy Manager for Infrastructure, Privacy and Security

alberto.difelice@digitaleurope.org / +32 471 99 34 25

About DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies. DIGITALEUROPE ensures industry participation in the development and implementation of EU policies.

DIGITALEUROPE Membership

Corporate Members

Airbus, Amazon, AMD, Apple, Arçelik, Bosch, Bose, Bristol-Myers Squibb, Brother, Canon, Cisco, DATEV, Dell, Dropbox, Epson, Ericsson, Facebook, Fujitsu, Google, Hewlett Packard Enterprise, Hitachi, HP Inc., HSBC, Huawei, Intel, Johnson & Johnson, JVC Kenwood Group, Konica Minolta, Kyocera, Lenovo, Lexmark, LG Electronics, Loewe, MasterCard, METRO, Microsoft, Mitsubishi Electric Europe, Motorola Solutions, MSD Europe Inc., NEC, Nokia, Nvidia Ltd., Océ, Oki, Oracle, Palo Alto Networks, Panasonic Europe, Philips, Pioneer, Qualcomm, Ricoh Europe PLC, Rockwell Automation, Samsung, SAP, SAS, Schneider Electric, Sharp Electronics, Siemens, Siemens Healthineers, Sony, Swatch Group, Tata Consultancy Services, Technicolor, Texas Instruments, Toshiba, TP Vision, Visa, VMware, Xerox.

National Trade Associations

Austria: IOÖ

Belarus: INFOPARK

Belgium: AGORIA

Bulgaria: BAIT

Croatia: Croatian

Chamber of Economy

Cyprus: CITEA

Denmark: DI Digital, IT

BRANCHEN

Estonia: ITL

Finland: TIF

France: AFNUM, Syntec

Numérique, Tech in France

Germany: BITKOM, ZVEI

Greece: SEPE

Hungary: IVSZ

Ireland: Technology Ireland

Italy: Anitec-Assinform

Lithuania: INFOBALT

Luxembourg: APSI

Netherlands: Nederland ICT,

FIAR

Norway: Abelia

Poland: KIGEIT, PIIT, ZIPSEE

Portugal: AGEFE

Romania: ANIS, APDETIC

Slovakia: ITAS

Slovenia: GZS

Spain: AMETIC

Sweden: Foreningen

Teknikföretagen i Sverige,

IT&Telekomföretagen

Switzerland: SWICO

Turkey: Digital Turkey Platform,

ECID

Ukraine: IT UKRAINE

United Kingdom: techUK