The EU regulation of electronic communications networks and services

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1 INTRODUCTION

Media content is brought to viewers and listeners over electronic communications networks. Electronic communications networks encompass over-the-air broadcasting networks, broadcasting satellites, cable television networks as well as broadband internet. The provision of electronic communications networks and services has been fully liberalised in the European Union in 1998 and the regulation of those networks and service is harmonised at the EU level.[1] Since 1998, the EU regulatory framework has been revised three times, in 2002, in 2009 and in 2018.[2] Today, the regulatory framework is mainly composed of the Directive establishing the European Electronic Communications Code (EECC) which was adopted in December 2018 and had to be transposed by the Member States by 21 December 2020[3] and the Regulation establishing the Body of European Regulators for Electronic Communications (BEREC) which was also adopted in December 2018.[4]

The chapter[5] has a similar structure to the EECC and is organised as follows: after this introduction, the second section deals with the scope of the regulatory framework; the third section deals with the objective and the principles of the regulation; the fourth section deals with the institutional set-up; the fifth section deals with rules governing market entry; the sixth section deals with the rules promoting competition in the market (access rules) which complement the general competition law rules; the seventh section deals with the rules on universal service and must carry; the eight section deals with end-users protection rules, which complement the general consumer protection rules and the last section briefly concludes.

[1] The EU telecommunications liberalisation programme was based on the: Commission of the European Communities, *Towards a Dynamic European Economy* (Green Paper on the Development of the Common Market for Telecommunications Services and Equipment, COM(87) 290, 1987).

[2] For a good introduction to telecommunications regulation, see Antonio Manganelli and Antonio Nicita, *The Governance of Telecom Markets: Economics, Law and Institutions in Europe* (Palgrave, 2020). For an insightful analysis of the evolution of EU electronic communications law, see Leigh Hancher and Pierre Larouche, 'The Coming of Age of EU Regulation of Network Industries and Services of General Economic Interest' in Paul Craig and Grainne de Búrca (eds), *The Evolution of EU Law* (2nd edn, OUP 2011). For an insightful analysis of the effects of EU electronic communications policy, see Martin Cave, Christos Genakos and Tommaso Valletti, 'The European Framework for Regulating Telecommunications: A 25-year Appraisal' (2019) 55 Review of Industrial Organization 47.

[3] Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (EECC) [2018] OJ L321/36. This Code replaces a series of four Directives (Framework 2002/21, Authorisation 2002/20, Access 2002/19, Universal Service 2002/22) which had been adopted in 2002 and revised in 2009. For a critical analysis of the EECC: Ingo Vogelsang, 'Has Europe Missed the Endgame of Telecommunications Policy?' (2019) 43 Telecommunications Policy 1.

[4] Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC Regulation) [2018] OJ L321/1).

[5] This chapter is a shorter and adapted version of Alexandre de Streel and Christian Hocepied, 'The Regulation of Electronic Communications Network and Services', in Laurent Garzanti, Mathew O'Regan, Alexandre de Streel and Peggy Valcke (eds), *Electronic Communications, Audio-visual Services and the Internet: Competition Law & Regulation* (Sweet & Maxwell 2019) 25–123.

2 SCOPE OF APPLICATION

EU law makes an important distinction between the regulation of the content which implies an editorial responsibility and the transmission of this content. The EECC regulates the latter and establishes the legal framework for the provision of electronic communications networks and services. Conversely, the EECC does not regulate the content delivered over electronic communications networks, such as broadcasting content. However, it takes into account the links existing between them, for example to foster media pluralism and cultural diversity.[6]

Electronic communications networks are sets of systems, equipment and active and passive elements permitting the transmission of signals, regardless of the content that these signals carry.[7] They cover all types of networks irrespective of the technology used, hence this legal definition is flexible enough to accommodate future technological developments. The EECC also applies to associated facilities such as entry to buildings, building wiring, antennae, towers and other supporting constructions.[8]

Electronic communications services are services, normally provided for monetary or non-monetary (in forms of data for instance) remuneration,[9] via electronic communications networks, which consist in one of the following categories of services: (i) internet access ser-

[6] EECC, art 1(3b). For instance, the EECC allows Member States to grant rights of use of radio frequencies to certain providers of radio or television broadcast content services outside open objective, transparent, non-discriminatory and proportionate authorisation procedures (art 48(2) EECC) and to impose "must carry" obligations on certain electronic communications network and service providers for the transmission of specified radio and television broadcast channels (art 114(1) EECC).

[7] Electronic communications networks are defined as "transmission systems, whether or not based on a permanent infrastructure or centralised administration capacity, and, where applicable, switching or routing equipment and other resources, including network elements which are not active, which permit the conveyance of signals by wire, radio, optical or other electromagnetic means, including satellite networks, fixed (circuit- and packet-switched, including Internet) and mobile networks, electricity cable systems, to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed": EECC, art 2(1).

[8] Associated facilities are defined as "services, physical infrastructures and other facilities or elements associated with an electronic communications network and/or an electronic communications service which enable and/or support the provision of services via that network and/or service or have the potential to do so and include buildings or entries to buildings, building wiring, antennae, towers and other supporting constructions, ducts, conduits, masts, manholes, and cabinets": EECC, art 2(10).

[9] The case law of the Court of Justice, under art 57 TFEU, considers that there is a remuneration when the service provider is paid by a third party and not by the service recipient: Cases C–51/96 and C-191/97 *Christelle Deliège v Ligue francophone de judo et disciplines associées ASBL, Ligue belge de judo ASBL, Union européenne de judo* and *François Pacquée* [2000] ECLI:EU:C:2000:199, paras 56–57; Case C-291/13 *Sotiris Papasavvas v Fileleftheros Dimosia Etairia* [2014] ECLI:EU:C:2014:

vices, (ii) interpersonal communications service and (iii) services consisting wholly or mainly in the conveyance of signals.[10]

The first category covers the *internet access services* which are defined as the services providing access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used.[11]

The second category covers the interpersonal communications services which are defined as the services enabling an interactive exchange of information between a finite number of natural persons, determined by the initiator of the communication and allowing the addressee to respond.[12] This can be the case for voice calls as well as Over-the-Top ("OTT") communications services, such as emails, messaging services and group chats. Conversely, linear broadcasting, video on demand, websites, social networks or blogs are not interpersonal communications services. The EECC further distinguishes between interpersonal communications services which are based on a phone number and OTT communications services which are not based on a phone number:

- *Number-based Interpersonal Communications Services* connect or enable connections (typically by terminating the communication on traditional fixed and mobile telephony networks) with national and international telephone numbers. They include the traditional telephone services but also OTT communications services when they allow a call to a phone number such as the Skype Out feature.[13] Their provision is subject to general authorisation and must comply with extensive end-users protection rules.[14]
- *Number-independent Interpersonal Communications Services* do not connect or enable the connections with national and international telephone numbers. They include most of the OTT communications services such as WhatsApp or Gmail.[15] Their provision is not subject to general authorisation and they must comply only with a limited number of end-users protection rules.[16]

2209, para 30. EECC, recital 16 also notes that in "the digital economy, market participants increasingly consider information about users as having a monetary value".

[10] EECC, art 2(4).

[11] Regulation (EU) 2015/2120 of 25 November 2015 laying down measures concerning open Internet access and retail charges for regulated intra-EU communications (Open Internet Regulation) [2015] OJ L310/1, art 2(2), as amended.

[12] EECC, art 2(5).

[13] Under the previous Framework Directive 2002/21, the Court of Justice decided that Skype Out was an electronic communications services: Case C-142/18 *Skype Communications v Institut Belge des services Postaux et des Télécommunications (IBPT)* [2019] ECLI:EU:C:2019:460, para 49.

[14] EECC, art 40 (notification security incidents), art 90(1b) (contributing to universal service fund), art 99 (non-discrimination), art 102 (information requirements for contracts), art 103 and Annex IX (publication of information), art 104 (publication quality of service and measures taken to ensure equivalent access by end-users with disabilities), art 106 (contract duration and termination), art 109 (emergency calls), art 110 (public warnings to end-users concerned in case of emergencies), art 111 (equivalent access end-users with disabilities) and art 115 (additional facilities).

[15] Under the previous Framework Directive 2002/21, the Court of Justice decided that Gmail was not an electronic communications services: Case C-193/18 *Google v Bundesrepublik Deutschland* [2019] ECLI:EU:C:2019:498, para 41.

[16] In particular, EECC, art 40: notification security incidents, art 61(2c): interoperability, art 90(1b): contributing to universal service fund, art 99: non-discrimination, art 103: publication of information, art 107: additional obligations, if provided in a bundle and art 110: public warnings to end-users concerned in case of emergencies.

The third category covers the *services consisting wholly or mainly of conveyance of signals between network termination points* of electronic communications networks.[17] The EECC does not define further this category but gives two examples: the transmission services used for the provision of machine-to-machine (M2M) services and for broadcasting. With regard M2M communications, only the transmission element falls within the scope of the EECC, whereas M2M services at the applications layer remain outside its scope. With regard to broadcasting, cable and satellite TV operators generally offer, on the one hand, the conveyance of television signals which is covered by the EECC and, on the other hand, content services which are not covered by the EECC.[18] However, it is not necessary that the operator itself conveys signals to be considered as a provider of an electronic communications service. What matters is that the operator is responsible vis-à-vis the end-users for transmission of the signal which ensures that they are supplied with the service to which they have subscribed.[19] The interpretation of *mainly* implies a weighting of the respective value of the elements of the service that are conveyance and that are not. Technical and "functional" characteristics, i.e. demand-side related aspects such as the end user perspective with regard to the OTT-provider's contractual liability vis-à-vis the end-user, may also be relevant.

Most obligations under the EECC (for instance, on authorisation, access or security) are imposed only on providers of publicly available networks and services. The EECC does not define the circumstances under which a service is considered to be publicly available, but the case law clarified that a service should be considered publicly available when any part of the public may choose to make use of the service offered.[20] Even if a service is made available only to the subscribers of a particular undertaking, it is considered to be publicly available where there is no limit placed on the number of potential subscribers and any part of the public may, de facto, make use of the service by becoming a subscriber.

[17] Network termination point is defined as: "the physical point at which an end-user is provided with access to a public electronic communications network, and which, in the case of networks involving switching or routing, is identified by means of a specific network address, which may be linked to an end-user's number or name": EECC, art 2(9). The NRA should define the location of the network termination point. In that regard, see BEREC Report of 4 October 2018 on the location of the network termination point, BoR (18) 159.

[18] Under the previous regulatory framework, the Court of Justice decided that "a service consisting in the supply of a basic package of radio and television programmes via cable, the charge for which includes transmission costs as well as payments to broadcasters and royalties paid to copyright collecting societies in connection with the transmission of programme content, falls within the definition of an electronic communications service (…) in so far as that service entails primarily the transmission of television content on the cable distribution network to the receiving terminal of the final consumer": Case C-518/11 *UPC Nederland v Gemeente Hilversum* [2013] ECLIEU:C:2013:709. The Court of Justice decided also that a service consisting in the supply of conditional access to a package of programmes which contains radio and television broadcast services and is retransmitted by satellite, falls within the definition of electronic communications service: Case C-475/12 *UPC DTH v Nemzeti Média– és Hírközlési Hatóság Elnökhelyettese* [2014] ECLI:EU:C:2014:285, para 36.

[19] *Id.* Case C-475/12 at para 43.

[20] Case E-6/16 *Fjarskipti and Icelandic Post and Telecom Administration* [2016] EFTA Ct. Rep. 1084, para 56.

3 OBJECTIVES AND REGULATORY PRINCIPLES

3.1 The Regulatory Objectives

The EECC lists four primary general objectives that should be followed by the authorities in charge of the electronic communications regulation:[21]

- *The promotion of connectivity and access to very high capacity fixed and mobile networks*, reflecting the importance of stimulating private investment in new infrastructures and contribute to the achievement of the connectivity targets set by the Commission;[22]
- *The promotion of effective competition* in the provision of electronic communications networks and services, including infrastructure-based competition;
- *The promotion of the EU internal market* with (i) the removal of the remaining obstacles and the facilitation of convergent conditions for the provision of electronic communications networks and services throughout the EU; (ii) the development of common rules and predictable regulatory approaches; (iii) the effective, efficient and coordinated use of radio spectrum; (iv) the establishment and development of trans-European networks; and (v) the provision, availability and interoperability of pan-European services and end-to-end connectivity;
- *The promotion of citizens' interests* by (i) ensuring connectivity and the widespread availability and take-up of very high capacity networks and services (in line with the first objective); (ii) enabling maximum benefits in terms of choice, price and quality on the basis of effective competition (in line with the second objective); (iii) maintaining the security of networks and services; (iv) ensuring a high and common level of protection for end-users through the necessary sector-specific rules; and (v) addressing the needs, such as affordable prices, of specific social groups, in particular end-users with disabilities or with special social needs.

The EECC does not set an order of priority between these four objectives. A balancing exercise may be required when they conflict with each other, for instance when extensive network access obligations foster the provision of new services but deter investment in new high-speed

[21] EECC, art 3(2). Art 1(2) EECC bundles the four regulatory objectives into two main policy aims.

[22] The Communication from the Commission of 14 September 2016 (European Commission, *Towards a European Gigabit Society*, COM(2016)587, 2016) sets three main objectives for 2025: (i) all main socio-economic drivers such as schools, universities, research centres, transport hubs and main providers of public services such as hospitals and administrations, as well as enterprises relying on digital technologies, should have access to gigabit connectivity (allowing users to download/upload 1 gigabit of data per second); (ii) all European households, rural or urban, should have access to connectivity offering a download speed of at least 100 Mbps, which can be upgraded to gigabit speed; and (iii) all urban areas as well as all major terrestrial transport paths (roads and railways) should have uninterrupted 5G coverage. A more recent Communication from the Commission of 9 March 2021 (European Commission, 2030 Digital Compass: the European way forward for the Digital Decade, COM(2021)118, 2021) sets a more ambitious objective for 2030: all European households should be covered by a gigabit network, with all populated areas covered by 5G. On the definition of Very High Capacity Networks, see BEREC Guidelines of 1 October 2020 on Very High Capacity Networks, BoR(20) 165. On the possibilities to stimulate private investment in electronic communications networks, see Wolfgang Briglauer and Ingo Vogelsang, 'A Regulatory Roadmap to Incentivize Investment in New High-Speed Broadband Networks' (2017) 106 DigiWorld Economic Journal 143.

networks. In such cases, the balancing should be done by the national authorities in charge of implementing them and Member States may not adopt measures depriving NRAs from their necessary margin of discretion on how a relative weighting of the conflicting objectives should be carried out in view of the specific circumstances.[23] The need for such a case-by-case weighting exercise is one of the "raisons d'être" of the independence granted to the NRAs.

3.2 The Regulatory Principles

Next to the regulatory objectives, the EECC prescribes six regulatory principles the national authorities should follow when regulating and monitoring the providers of electronic communications networks and services under their jurisdiction:[24]

- *Regulatory predictability and consistency* both in time and across the EU. Decisions of national authorities should be consistent over time so that they can be anticipated by the regulated firms. This principle protects private investors from public hold-up, which is essential in an industry where investments are important and amortised over a long period. However, predictability should be combined with the flexibility of the law and the need to adapt regulation to technology and market evolutions. To best reconcile both principles, NRAs must, on the one hand, revise the application of the rules regularly (to ensure flexibility) and, on the other hand, apply the known principles of the EECC (to ensure predictability). In its geographical dimension, predictability requires that the decisions of the national authorities are consistent throughout the EU when the circumstances of the respective national markets are similar. To foster such consistency, the EECC requires the NRAs to cooperate with each other and with the Commission and to take into account BEREC or Commission soft-law instruments;
- National authorities must ensure that, in similar circumstances, there is *no discrimination* in the treatment of providers of electronic communications networks and services. The EECC repeats this principle in several specific provisions relating to the assignment of individual rights of use for scarce resources such as radio spectrum or telephone numbers, to the imposition of economic regulatory remedies such as compulsory access to the network or to the protection of end-users;
- National authorities must apply EU law in a *technologically neutral* manner and should not favour a particular technology such as fixed fibre over mobile 5G for instance;
- National authorities must *promote efficient investment and innovation in new and enhanced infrastructures*. Again, several applications are provided in the EECC. For instance, when NRAs impose price control obligations, they should take appropriate account of the risk

[23] These broad discretionary powers have been recognised by the Court of Justice in many judgments, for instance: Case C-55/06 *Arcor v Bundesrepublik Deutschland* [2008] ECLI:EU:C:2008:244, paras 116, 132 and 153–58; Case C-424/04 *Commission v France* [2005] ECLI:EU:C:2005:298, para 61; Case C-28/15 *KPN and Others v Autoriteit Consument en Markt (ACM)* [2015] ECLI:EU:C:2015:610, para 36; Case C-277/16 *Polkomtel v Prezes Urzędu Komunikacji Elektronicznej PUKE* [2017] ECLI:EU:C:2017:989, para 32.

[24] EECC, art 3(4). On good regulatory principles, see Robert Baldwin, Martin Cave and Martin Lodge, *Understanding Regulation: Theory, Strategy and Practice* (2nd edn, OUP 2012) and Christopher Decker, *Modern Economic Regulation: An Introduction to Theory and Practice* (CUP 2014).

incurred by the investing network operators and the need to promote the deployment of very high capacity networks;
- National authorities must take due account of the variety of conditions relating to infrastructure, competition, the circumstances of end-users and, in particular, consumers in the various geographic areas within a Member State (*case-by-case analysis*);
- National authorities must choose the least intrusive regulatory intervention (*proportionality*). For example, regarding user protection, national authorities should always choose the least intrusive obligations to meet social objectives.[25]

4 THE INSTITUTIONAL FRAMEWORK

4.1 National Level

The national regulatory authorities and other competent authorities play the key role in implementing the provisions of the EECC.[26] They are entrusted with numerous tasks and enjoy broad discretionary powers as the exercise of those tasks requires complex technical, economic assessment. Those important and discretionary powers explain and justify the extensive independence enjoyed by the authorities. Two degrees of independence are relevant:

- the first degree is *independence vis-à-vis the operators* to alleviate conflict of interest and that the authorities are referees and players at the same time. It implies that the authorities are legally distinct and functionally independent of any natural or legal person providing electronic communications networks, equipment or services;[27]
- the second degree is political independence, i.e. *independence vis-à-vis the Parliament and government* in order to guarantee the credibility of authorities in regulating the sector in the long-term interest of the users and ensure that they exercise their powers impartially, transparently and in a timely manner.[28] It implies a protection for the heads of the authorities[29] as well as an autonomy in managing the budget.[30]

[25] Proportionality is also a general principle in EU law: TEU, art 5(4).

[26] On the role of independent regulators in network industries, see Tony Prosser, *Law and the Regulators* (OUP 1997).

[27] EECC, art 6.

[28] Case C-560/15 *Europa Way and Persidera v Autorità per le Garanzie nelle Comunicazioni and Others* [2017] ECLI: EU:C:2017:593, para 51.

[29] EECC, art 7: the head of the NRA (or, where applicable, the members of the collegiate body) must be appointed for a term of office of at least three years, following an open and transparent selection procedure and may only be dismissed if he/she no longer fulfils the conditions required for the performance of his or her duties which were laid down in national law before their appointment. The Court of Justice decided that the dismissal of the members of the board of the Spanish NRA, after the merger of the NRA with other national regulatory authorities in order to create a multi-sectoral regulatory body, was a violation of the members' political independence, in the absence of any rules guaranteeing that such dismissals do not jeopardise the independence and impartiality of such members: Case C-424/15 *Xabier Ormaetxea Garai and Lorenzo Almendros. v Administración del Estado* [2016] ECLI:EU:C:2016:780, para 52.

[30] EECC, art 9: NRAs should have separate annual budgets and be autonomous in the implementation of this budget. This budget should also be adequate to carry the regulatory tasks at the national and EU levels. However, this financial autonomy does not impede the application of provisions of national law on public finances and, in particular, provisions for limiting and streamlining public authority spending: Case C-240/15 *Autorità per le Garanzie nelle Comunicazioni (AGCOM) v Istituto Nazionale di Statistica – ISTAT and Others* [2016] ECLI:EU:C:2016:608, para 44.

This distinction between the degrees of independence leads to a distinction between the types of authorities and, in turn, the allocation of regulatory tasks between those authorities.

- On the one hand, the *National Regulatory Authorities* benefit from both degrees of independence and they are entrusted with a minimum number of tasks which are listed in the EECC, hence the Parliament and the government cannot interfere in the execution of those tasks.[31] Indeed, in several cases, the Court of Justice has affirmed those independence requirements to protect the NRAs against their national Parliaments and/or governments;[32]
- On the other hand, the *other competent authorities* merely benefit from the first degree of independence and can be entrusted with all the other regulatory tasks which have not been attributed by the EECC to NRAs, hence the Parliament and the government can interfere with the execution of those other regulatory tasks.

However, independence does not mean absence of accountability. Indeed, the EECC acknowledges the legitimacy of supervision mechanism in accordance with national constitutional law.[33] NRAs must also report annually and transparently, inter alia, on the state of the electronic communications market, on the decisions they adopt, on their human and financial resources and how those resources are attributed, as well as on future plans.[34]

Moreover, any user or provider of electronic communications networks or services who is affected by a decision of the competent authority has a right of appeal to an independent appeal body.[35] The appeal body should take the merits of the case into account and not limit its control

[31] Those tasks include (i) ex ante market regulation, including the imposition of access and interconnection obligations; (ii) dispute resolution between undertakings; (iii) advising on radio-spectrum management; (iv) contributing to end-users protection; (v) monitoring issues regarding net neutrality; (vi) calculating the net cost of the provision of universal service; and (vii) ensuring number portability. Conversely, no political independence is required for the authority empowered to grant rights of use for land, spectrum and numbers or with regard to universal service.

[32] See Case C-424/04 *Commission v Germany* [2009] ECLI:EU:C:2009:749, where the Court of Justice condemned Germany for having adopted a law restricting the power of the NRAs in analysing and regulating emerging markets; Case C-220/07 *Commission v France* [2008] ECLI:EU:C:2008:354, para 34 and Case C-154/09 *Commission v Portugal – Universal Service* [2010] ECLI:EU:C:2010:591, where the Court of Justice condemned France and Portugal for adopting a law restricting the power of the NRAs in designating the universal service provider, according to a procedure which is efficient, objective and non-discriminatory; Case C-518/11 *supra* note 18 at para 54; Case C-560/15, *supra* note 28 at para 57 where the Court of Justice considered that the Parliament and the government could not intervene in an on-going selection procedure organised by the Italian NRA for radio spectrum assignment.

[33] EECC, art 8(1).

[34] EECC, art 8(2).

[35] EECC, art 31. This right of appeal benefits not only the addressee of the decision under appeal but also the users and the operators which are in competition with the decision's addressees and whose rights are adversely affected by it. See Case C-426/05 *Tele2 Telecommunications v Telekom–Control–Kommission* [2008] ECLI:EU:C:2008:103, para 48, related to a market analysis decision; Case C-55/06, *supra* note 23 at para 176 related to a cost orientation decision; Case C-282/13 *T–Mobile Austria v Telekom–Control–Kommission* [2015] ECLI:EU:C:2015:24, para 37, related to a procedure for the authorisation of a transfer of rights to use radio frequencies.

to procedural matters.[36] The appeal process should be effective[37] and the appeal proceedings should not be unduly lengthy. Pending the outcome of the appeal, the decision of the competent authority stands, unless interim measures are granted.[38] The appeal body does not have to be a Court within the EU meaning, but should be independent of the parties involved (internal independence) and of any external intervention or political pressure (external independence). It must have the appropriate expertise to enable it to carry out its functions effectively.[39] If the appeal body is not a Court within the meaning of the TFEU, then its decision should be able to be reviewed by such a Court to ensure that a preliminary ruling question may be referred to the Court of Justice and that the EU judicial mechanism to guarantee the common interpretation of EU law is preserved.[40]

The EECC also imposes far-reaching transparency obligations on competent authorities, before taking measures having significant market impact. They should run public consultations giving interested parties the opportunity to comment on the draft measure. Such consultation should last a reasonable period, at least one month unless there are exceptional circumstances. The results of the consultation should be made public, except in the case of confidential information.[41]

Besides the requirements of independence and transparency, the EECC obliges Member States to entrust national authorities with the power to impose penalties which are be appropriate, effective, proportionate and dissuasive.[42] Specifically to ensure the compliance with conditions in general authorisation and individual rights of use, the national authorities should have the power, after having heard the undertaking, to require the cessation of regulatory breach either immediately or within a reasonable time limit and take appropriate and proportionate measures to ensure compliance.[43] In the case of a serious breach or repeated breaches of the conditions, the authorities may even prevent an undertaking from continuing to provide electronic communications networks or services. In urgent cases where there is an immediate and serious threat to public safety, security, health or risks creating serious economic or operational problems for other providers or users, the authorities may adopt interim measures.

[36] EECC, art 31(1) *in fine*. Even if the NRA decision under appeal has followed some Commission harmonisation guidelines, the appeal body can control the legality of such a decision: Case C-28/15 *KPN and Others v Autoriteit Consument en Markt (ACM)* [2015] ECLI:EU:C:2015:610, para 51. However, in exercising such control, the national Court should take the Commission's recommendation into account: see paras 41 to 42.

[37] In Case C-231/15 *Prezes Urzędu Komunikacji Elektronicznej (PUKE) and Petrotel v Polkomtel* [2015] ECLI:EU:C:2016:769, para 25, the Court stressed that the appeal body must be able to annul appealed decisions with retroactive effect when this is necessary to provide effective protection for the undertaking which has brought the appeal.

[38] EECC, art 31(1).

[39] EECC, art 31(1).

[40] EECC, art 31(2). In Case C-222/13 *TDC v Erhvervsstyrelsen* [2014] ECLI:EU:C:2014:2265, the Court of Justice recalled (see paras 27 to 31) the main factors to determine whether a body is a Court within the meaning of Article 267 TFEU and considered (see para 38) that the Teleklagenævnet, the Danish Telecommunications Complaints Board, was not meeting such conditions.

[41] EECC, arts 23 and 30(1).

[42] EECC, art 29.

[43] EECC, art 30.

4.2 Mechanisms to Promote Regulatory Consistency across the European Union

As there is no European regulator for electronic communications, several institutions have been established and several mechanisms have been set up to ensure that national regulators apply the EECC in a consistent manner across Europe.

First, the *European Commission* has important powers to contribute to this consistent enforcement. Indeed, where divergences in the implementation by the national authorities create a barrier to the internal market, the Commission may adopt harmonisation recommendations that should be taken into account by the national authorities.[44] If those harmonisation recommendations do not bring enough regulatory consistency, the Commission may even adopt harmonisation decisions which are binding to the national authorities in some specific cases.[45]

Second, a coordination network has been established between the NRAs: the *Body of European Regulators for Electronic Communications. BEREC* is composed of two bodies: (i) BEREC – Board of Regulators, which performs this coordination role and does not have a legal personality, and (ii) the Agency for Support for BEREC (BEREC Office) which provides support for the Board of Regulators and is an EU agency with a legal personality based in Riga. The Board of Regulators is made of one member from each Member State, appointed by the NRA that has primary responsibility for overseeing the day-to-day operation of the electronic communications markets.[46] To foster regulatory consistency, BEREC adopts detailed guidelines to address technically complex issues such as those relating to the application of symmetric access obligations, the assessment of co-investment proposals or the criteria to be met for a network to be deemed of very high capacity.[47]

Third, a high-level expert group has been set up to assist EU institutions in coordinating and harmonising spectrum policy across Europe: the *Radio Spectrum Policy Group*.[48] The RSPG comprises one senior representative in charge of strategic radio spectrum policy from each Member State and high-level representatives from the Commission.[49]

Fourth, *technical standards* also play an important role in regulating the digital industries. They are key to ensuring network and service interoperability, end-to-end connectivity within the Member States but also across the Member States. This is why the Commission, following the EU standardisation bodies,[50] may adopt a list of non-compulsory standards or specifications to encourage the harmonised provision of electronic communications networks

[44] EECC, art 38. In Case C-55/06, *supra* note 23 at para 94 and in Case C-28/15, *supra* note 36 at para 41, the Court of Justice decided that even if recommendations are not binding, the national courts have to take them into consideration, in particular where the recommendations cast light on the interpretation of national measures adopted in order to implement them or where they are designed to supplement binding EU provisions.

[45] EECC, art 38(3) for regulatory issues regarding market definition and SMP designation and regarding numbering.

[46] BEREC Regulation, art 7.

[47] BEREC Regulation, art 4. See <https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/> accessed 3 June 2021.

[48] Commission Decision of 11 June 2019 setting up the Radio Spectrum Policy Group [2019] OJ C196/16. See: <http://rspg–spectrum.eu/> accessed 1 May 2020.

[49] RSPG Decision, art 3.

[50] The European standardisation organisations are the European Committee for Standardisation (CEN), the European Committee for Electrotechnical Standardisation (Cenelec), and the European Telecommunications Standards Institute (ETSI). The general EU rules on standardisation are Regulation

and services.[51] If those standards or specifications have not been adequately implemented, the Commission may, after a public consultation, make them compulsory to the extent necessary to ensure such interoperability and to improve freedom of choice for users.[52] As regards the DAB+ standard, it is promoted by the EECC itself which requires that new car radio receivers must comprise a receiver capable of receiving and reproducing at least radio services provided via digital terrestrial radio broadcasting.[53]

5 MARKET ENTRY AND DEPLOYMENT

5.1 General Authorisation

Contrary to the AVMS Directive, the EECC does not require Member States to comply with the country of origin principle and does not entitle providers authorised in one Member State to provide services throughout the EU. Providers need to comply with authorisation procedures and legislations of each Member State in which they are active. However, to facilitate cross-border entry, the EECC harmonises extensively the conditions that Member States may impose on the provision of electronic communications services.

While the EECC acknowledges that Member States may, in principle, subject the provision of electronic communications networks or services to a general authorisation,[54] the EECC exempts providers of number-independent Interpersonal Communications Services as these services do not benefit from the use of public numbering resources and do not participate in a publicly assured interoperable ecosystem.[55] Member States may impose that undertakings subject to the general authorisation submit a notification to the national competent authorities before starting their activities. Upon such notification, the undertaking can begin its operations without having to wait for any explicit decision or other administrative act by the authorities.[56] Moreover, the information that could be requested in such prior notification is limited to the name and the legal status of the providers, its geographical and website addresses with a contact person as well as a short description of the networks or services intended to be provided and an estimated date for starting the activities.[57]

Furthermore, the EECC provides for a maximum list of conditions that Member States may attach to the general authorisation. This list comprises nine general conditions for all the

(EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation [2012] OJ L 316/12, as amended.

[51] EECC, art 39(1) and (2). Commission Decision 2007/176 of 11 December 2006 establishing a list of standards and/or specifications for electronic communications networks, services and associated facilities and services [2007] OJ L86/11, as amended by Decision 2008/286.

[52] EECC, art 39(3) and (4).

[53] EECC, art 113 and Annex XI.

[54] A general authorisation is defined as 'a legal framework established by a Member State ensuring rights for the provision of electronic communications networks or services and laying down sector-specific obligations that may apply to all or to certain types of electronic communications networks and services, in accordance with the EECC': EECC, art 2(22).

[55] EECC, art 12(2) and recital 44.

[56] EECC, art 12(3).

[57] BEREC Guidelines of 6 December 2019 for the notification template pursuant to article 12, paragraph 4 of Directive 2018/1972 of the European Parliament and of the Council, BoR(19) 259.

authorisations[58] as well as six additional specific conditions for the authorisation to provide electronic communications networks[59] and four other additional specific conditions to provide electronic communications services.[60] A one-time and/or periodic administrative charges can be imposed but such charges can only cover the administrative costs borne by the national authorities for the management of the general authorisation and the rights of use as well as the imposition of sector-specific obligations.[61]

Undertakings subject to the general authorisation have the right to (i) start their activities covered by the authorisation; and (ii) access the scarce resources necessary for such activities such as land, radio spectrum or numbers.[62] In addition, the undertaking providing the electronic communications networks or services to the public have also the right to (i) negotiate interconnection with and, where applicable, obtain access to – or interconnection from – other providers of publicly available communications networks and services; and (ii) potentially be designated as a universal service provider.[63]

5.2 Radio Spectrum Allocation and Assignment

There are two main steps in spectrum management:[64] (i) the first is the *allocation* of spectrum which consists in designating a given radio spectrum band for use by one or more types of radio communications *services* under specified conditions;[65] and (ii) the second is the *assignment* of spectrum which consists in designating the *operators* that have the rights to use specific spectrum bands to offer their services.

[58] EECC, Annex I, Part A listing the conditions related to: (1) administrative charges; (2) personal data and privacy protection specific to the electronic communications sector; (3) information to be provided under the notification procedure or required market analysis and for verifying compliance with the conditions or publishing comparative overviews; (4) enabling legal interception by competent national authorities; (5) terms of use for communications from public authorities to the general public for warning the public of imminent threats; (6) terms of use during major disasters or national emergencies to ensure communications between emergency services and authorities; (7) access obligations; (8) measures designed to ensure compliance with standards or specifications; and (9) transparency obligations to ensure end-to-end connectivity.

[59] EECC, Annex I, Part B listing the conditions related to: (1) interconnection; (2) must carry; (3) measures for the protection of public health against electromagnetic fields; (4) maintenance of the integrity of public electronic communications networks; (5) security of public networks against unauthorised access; and (6) use of shared radio-spectrum, which is not subject to individual rights of use.

[60] EECC, Annex I, Part C listing the conditions related to: (1) interoperability of services; (2) accessibility by end-users of numbers; (3) specific consumer protection rules; and (4) restrictions in relation to the transmission of illegal and harmful content.

[61] EECC, art 16(1a). The administrative charges can only be compensatory: Case C-485/11 *Commission v France* [2013] ECLI:EU:C:2013:427, para 28; Case C-71/12 *Vodafone Malta and Mobile Communications Limited v L-Avukat Generali and Others* [2013] ECLI:EU:C:2013:431, para 22. These charges can only cover the administrative costs mentioned in the EECC and not all the other administrative costs incurred by the NRA: Case C-228/12 *Vodafone and Others* [2013] ECLI:EU:C:2013:495, para 40.

[62] EECC, art 15(1).

[63] EECC, art 15(2).

[64] For a very good analysis of the role of radio spectrum and the welfare implications of its management, see Martin Cave and Willian Webb, *Spectrum Management: Using the Airwaves for Maximum Social and Economic Benefit* (CUP 2015).

[65] EECC, art 2(19).

The allocation of radio frequencies is mainly decided at international level within the International Telecommunication Union and reflected in ITU Radio Regulations providing for a Table of Frequency Allocations. However, those Regulations do not necessarily determine the usage of each frequency band. This international framework is thus complemented by an EU coordination framework established by the Radio Spectrum Decision and the Multiannual Radio Spectrum Policy Programme.[66] Under this Decision, the Commission adopts appropriate technical implementing measures on the harmonisation and allocation of radio spectrum.[67] On that basis, Member States publish their national radio frequency allocation plans. A single information database, presented in a harmonised format, has therefore been developed to allow easy access to spectrum information throughout the EU.[68]

With regard to the spectrum that was allocated for broadcasting purposes, the existing international arrangements reserving the UHF band (470–862 MHz) for broadcasting use were revised during the Regional Radio-communication Conference in 2006 ("RRC–06") and the World Radio Conference in 2007 ("WRC–07"). These instruments have allocated the use in Europe of part of the UHF band (the 790–862 MHz sub-band) to mobile services, in addition to broadcasting and fixed services.[69] In the Radio Spectrum Policy Programme, the European Parliament and the Council decided to mandate the opening up of the 800 MHz band throughout the EU.[70] The Commission advocated also for a coordinated release of 694–790 MHz (700 MHz) frequency band while accommodating the specific needs of broadcasting services distribution.[71] The International Telecommunication Union's Radio Regulations, adopted subsequently by the World Radio–communication Conference in 2015, provided for the allocation of the 700 MHz frequency band to both broadcasting and mobile services on a co-primary basis.[72] Accordingly, the European Parliament and Council adopted

[66] Decision 676/2002 of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community [2002] OJ L108/1, which encompasses sectors such as transport and research and development and Decision 243/2012 of the European Parliament and of the Council of 14 March 2012 establishing a multiannual radio spectrum policy programme [2012] OJ L81/7.

[67] The list of decisions is available at <https://ec.europa.eu/digital–single–market/en/news/radio–spectrum–decisions> accessed 1 May 2020.

[68] Commission Decision 2007/344 on harmonised availability of information regarding spectrum use within the Community [2007] OJ L129/67. The ERO Frequency Information System has been established as the single information point and national authorities are required to upload all relevant information regarding spectrum use to this database, which is publicly available: see <www.efis.dk> accessed 1 May 2020.

[69] The ITU Radio Regulations and, at the European regional level, the GE06 agreement enable mobile services to operate anywhere in the 470–862 MHz frequency range, subject to bilateral agreement between the countries that might be affected in order to avoid harmful interference.

[70] Commission Decision 2010/267 on harmonised technical conditions of use in the 790–862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union [2010] OJ L117/ 95.

[71] European Commission, A Digital Single Market Strategy for Europe (Communication from the Commission of 6 May 2015, COM(2015)192) p 10.

[72] Only the 470–694 MHz ("sub–700 MHz") frequency band remains exclusively allocated to the broadcasting services on a primary basis and to wireless audio PMSE use on a secondary basis.

a decision[73] requiring Member States to facilitate the use of the 700 MHz frequency band for terrestrial wireless broadband electronic communications services.

Member States had to adopt coherent national roadmaps covering activities and timescales for frequency re-planning, technical developments for network and end-user equipment, coexistence between radio and non-radio equipment, existing and new authorisation regimes, mechanisms to avoid harmful interference with spectrum users in adjacent bands and information on the possibility of compensation for migration costs, where such costs would arise, in order to avoid, inter alia, costs for end users or broadcasters.

The second step in spectrum management is the assignment of radio spectrum to specific undertakings. Member States should ensure the effective management of radio spectrum for electronic communications networks and services in their territory taking into account that radio spectrum is a public good that has an important social, cultural and economic value. Thus, national competent authorities should in principle issue general authorisations and grant rights of use on the basis of objective, transparent, pro-competitive, non-discriminatory and proportionate criteria. In particular, Member States should implement the principles of technology and service neutrality.[74]

However, Member States may limit the number of rights of use to be granted if this is necessary to ensure an efficient use of the spectrum, maximise users' benefits and facilitate competition.[75] In such case, those limited rights should be granted through competitive (such as auction) or comparative (such as beauty contest) selection procedures. Those procedures may only aim at promoting efficient use of the frequencies, competition and innovation and network coverage and quality of service.[76] The procedures should use selection criteria which are objective, transparent, non-discriminatory and proportionate.[77] In those cases, the selection procedure should be published with its reasons and applications should be invited.

An exception to the requirement of those open procedures apply in favour of the providers of radio or television broadcast content services, when this is necessary to achieve a general interest objective.[78] However, the granting procedure should remain objective, transparent, non-discriminatory and proportionate. Once granted, the concerned rights of use may be considered as being granted *intuitu personae* and Member States may prohibit the transfer or lease to other undertakings of individual rights of use for radio spectrum.[79] An obligation to use the assigned frequency band for the provision of specific audio-visual services may also be attached.[80]

[73] Decision 2017/899 of the European Parliament and of the Council of 17 May 2017 on the use of the 470–790 MHz frequency band in the Union [2017] OJ L138/131.

[74] EECC, art 45.

[75] EECC, art 55(1).

[76] EECC, art 55(2). Case C-560/15, *supra* note 28 at para 74, the Court of Justice considered that the number of available radio frequencies resulting from the digital dividend may be limited due to the risk of interference.

[77] EECC, art 55.

[78] EECC, art 48(3).

[79] EECC, art 51(1).

[80] EECC, art 45(5d) and Annex I, Part D, point 1. At the stage of frequency allocation, Member States may restrict the application of the principles of technology and service neutrality, by reserving some frequency bands for certain technologies uses, e.g. to promote cultural and linguistic diversity and media pluralism.

The EECC provides for a list of maximum ten conditions that may be attached to rights of use for radio spectrum which apply in addition to the general authorisation conditions.[81] Those conditions should be non-discriminatory, proportionate and transparent. The conditions should not prevent spectrum sharing and may provide for infrastructure sharing, national roaming access agreement and joint roll-out of infrastructures.[82] Also, they cannot restrict the trading or leasing of frequencies, unless these frequencies were granted free of charge or assigned for broadcasting.[83] Transfer may only be prohibited when there is a clear risk that the new holder is unable to meet the original conditions or when the transfer is likely to result in significant harm to competition.[84]

In addition to administrative charges, fees may be imposed for the rights to use frequencies. The EECC provides that the fees should ensure the optimal and efficient assignment and use of the frequencies, including by (i) setting reserve prices as minimum fees by having regard to the value of those rights in their possible alternative uses; (ii) taking into account costs entailed by conditions attached to those rights; and (iii) linking payment arrangements to the actual availability for use of the frequencies.[85] Those fees should also be objectively justified, transparent, non-discriminatory,[86] proportionate in relation to their intended purpose and take into account the four main EECC objectives, including the promotion of very high capacity network. According to the Court of Justice, the fees must be set at an appropriate level to reflect inter alia the value of the use of the radio spectrum, which requires taking into account the economic and technical situation of the market concerned.[87] Those principles and

[81] EECC, arts 13(1) and 47(1) and Annex I, Part D listing conditions related to: (1) obligation to provide a service or to use a type of technology, including coverage and quality requirements; (2) effective and efficient use of radio spectrum; (3) technical and operational conditions that are necessary for the avoidance of harmful interference and for the limitation of exposure of the general public to electromagnetic fields where they are different from those contained in a general authorisation; (4) maximum duration; (5) transfer of rights; (6) usage fees; (7) commitments made during the selection procedure; (8) obligations to pool or share radio spectrum or allow access to radio spectrum for other users; (9) obligations under international agreements; and (10) obligations specific to an experimental use of radio spectrum bands. In particular, Member States may impose conditions relating to the effective and efficient use of frequencies with the aim to preclude spectrum hoarding and set out strict deadlines for the effective exploitation of rights of use by the holder.

[82] EECC, art 47(2). For an overview of mobile infrastructure sharing arrangements, see BEREC Report of 14 June 2018 on infrastructure sharing, BoR(18)116.

[83] EECC, art 51(1).

[84] EECC, arts 51(3) and 52(2d).

[85] EECC, art 42(2). The Court of Justice decided that the analogous provision under the previous regulatory framework had direct effect: Case C-55/11 *Vodafone España and Others* [2012] ECLI:EU:C:2012:446, para 38. In Case C-560/15, *supra* note 28 at para 68, the Court of Justice cautioned against a reserve fee set at a level which impedes the access of new operators to the market.

[86] In Case C-85/10 *Telefónica Móviles España v Administración del Estado* [2011] ECLI:EU:C:2011:141, para 31, the Court of Justice decided that Member States could not, in principle, apply different charges to competing operators for the use of scarce resources whose values appear to be equivalent in economic terms. However, in the same case (see para 34), the Court also allowed distinction between, on the one hand, the digital or analogue technology used and, on the other hand, within each technology, the different uses which are made of it, so that equality of opportunity is secured as between the various economic operators. Such differentiation was also accepted in Case C-560/15, *supra* note 28 at para 71.

[87] *Id.* Case C-85/10 at para 28. In that case, the Court of Justice noted that an excessive fee is likely to discourage the use of spectrum thereby resulting in its underutilisation, while a too low charge risks undermining the efficiency of the spectrum use (see para 29). In the same case, the Court also decided

criteria are met if the fees result from an auction process.[88] Contrary to administrative charges, Member States remain free to use these fees for any purpose whatsoever.[89]

To ensure sufficient legal stability for investors which often have to carry out important and long-term investments, the rights of use for radio spectrum should be unlimited or for a period which is appropriate for efficient use of the frequencies, competition and innovation as well as network coverage and quality of service, including allowing for investment amortisation.[90] Regarding spectrum bands used for wireless broadband services for which harmonised conditions have been set at EU level, the duration of the rights should, in principle, be at least 20 years, with a first period of at least 15 years and a quasi-automatic extension for the remaining of the period.[91]

6 PROMOTION OF COMPETITION

To reduce economic entry barriers and ensure sustainable effective competition,[92] NRAs and other competent authorities may impose obligations on all providers of electronic communications networks and services meeting some conditions defined in the EECC (symmetric regulation) or on the providers designated by the NRAs as having Significant Market Power (asymmetric regulation). Those obligations may be behavioural, such as compulsory access or price control or, more exceptionally structural such as vertical separation.

6.1 Symmetric Obligations

Symmetric obligations are imposed on all undertakings meeting some conditions set in the law, independently of a specific market power determination by an NRA. However, the legal conditions justifying those obligations are related to some form of market power and the obligations aim to ensure that such power cannot be abused. The EECC and related legal instruments provide for three main types of symmetric obligations: (i) interconnection and interoperability; (ii) access to network elements which are not easily duplicable; and (iii) access to Application Programme Interfaces (API), Electronic Programme Guides (EPG) and

that Member States can increase, even significantly, the fee payable for a particular technology in response to both technical and economic developments on the market for telecommunications services, but leaving unchanged the charge for another technology, provided that the different amounts imposed reflect the respective economic values of the uses made of the scarce resource at issue (see para 35).

[88] Case C-375/11 *Belgacom and Others* [2013] ECLI:EU:C:2013:185, para 5; Case C-560/15, *supra* note 28 at para 68.

[89] *Id.* Case 375/11 at para 45 and Case C-85/10, *supra* note 86 at para 32.

[90] EECC, art 49 (1).

[91] EECC, art 49(2). Exceptions to the 20-year minimum rule are possible inter alia for limited geographical areas, where access to high-speed networks is severely deficient or absent, specific short-term projects or experimental use: EECC, art 49(3). Adjustments are also possible to ensure the simultaneous expiry of the duration of rights in one or several bands: EECC, art 49(4).

[92] On the economics of the telecommunications sector, see: Martin E Cave, Sumit K Majumdar and Ingo Vogelsang (eds), *Handbook of Telecommunications Economics, Volume 1: Structure, Regulation and Competition* (Elsevier 2002); and Sumit K Majumdar, Ingo Vogelsang and Martin E Cave (eds), *Handbook of Telecommunications Economics, Volume 2: Technology Evolution and the Internet* (Elsevier 2005).

Conditional Access System (CAS) to guarantee the accessibility of digital radio and television broadcasting services.

First, competent authorities should encourage and, where appropriate, ensure adequate access and *interconnection and the interoperability* of services.[93] The powers of the authorities are very broad[94] but can only be exercised to promote efficiency, sustainable competition, the deployment of very high capacity networks, efficient investment and innovation and, ultimately, give the maximum benefit to end-users. Although the powers of the competent authorities are open-ended, the EECC gives particular examples of possible intervention when the interconnection negotiations have not been successful.

On the one hand, the NRAs may impose on the undertakings that are subject to general authorisation (i.e., the providers of electronic communications networks and services which are not number independent interpersonal communications services) obligations, including interconnection, if (i) those providers control access to end-users and (ii) the obligations are necessary and proportionate to ensure end-to-end connectivity.[95] The national competent authorities may also impose the obligations which are necessary to make their services interoperable.[96] On the other hand, the national competent authorities may impose on the providers of number-independent interpersonal communications services obligations to make their services interoperable, including by relying on standards, if (i) those providers reach a significant level of coverage and user uptake; (ii) the Commission has found an appreciable threat to end-to-end connectivity between end-users and has adopted implementing measures specifying the nature and scope of any obligations that may be imposed by the national authorities; and (iii) the obligations imposed are necessary and proportionate to ensure interoperability of interpersonal communications services.[97]

Second, already before the enactment of the EECC, the Broadband Cost Reduction Directive (BCRD) imposed on network operators the obligation to meet reasonable requests for *access to their physical infrastructures* under fair and reasonable terms with a view to deploying high-speed electronic communications networks.[98] The EECC complements the BCRD in ensuring that NRAs may force the network providers to give access to wiring, cables

[93] EECC, art 61(1) and (2).

[94] As observed by the Court of Justice in Case C-192/08 *TeliaSonera Finland* (C-192/08) [2009] ECLI:EU:C:2009:696; Case C-85/14 *KPN v Autoriteit Consument en Markt (ACM)* [2015] EU:C:2015: 610, para 36.

[95] EECC, art 61(2a).

[96] EECC, art 61(2b).

[97] EECC, art 61(2c). As noted by the Commission services, this need could arise from a significant decline in usage of the number-based communications system, so that the public interest in end-to-end connectivity can no longer be assured through that system – either because a single number-independent ICS becomes the predominant mode of interpersonal communications or because of a market fragmentation with a large number of different, non-interoperable communications applications: European Commission, *Review of the Electronic Communications Regulatory Framework* (Executive Summary 2: Electronic communications services and end-user rights, 2016) p 3 <http://ec.europa.eu/information_society/newsroom/image/document/2016-52/executive_summary_2_-_services_40995.pdf> accessed 1 May 2020.

[98] Directive 2014/61/EU on measures to reduce the cost of deploying high-speed electronic communications networks (Broadband Cost Reduction Directive) [2014] OJ L155/1, arts 3, 8 and 9. On the effects of this Directive so far, see European Commission, *Report from the Commission of 27 June 2018 on the implementation of the Directive 2014/61 on measures to reduce the cost of deploying high-speed electronic communications networks* (COM(2018) 492 final).

and associated facilities inside buildings or up to the first concentration or distribution point (typically inside or in front of a building) when the replication of such network elements is economically inefficient or physically impracticable.[99]

Third, NRAs may impose *access to APIs and EPGs* used to receive digital radio and television broadcasting services on FRAND terms to the extent necessary to ensure accessibility for end-users to such digital radio and television broadcasting services.[100] Moreover, all providers of CAS giving access to digital television and radio services and the access services of which broadcasters depend on to reach any group of potential viewers should offer to all broadcasters on FRAND terms technical services enabling the broadcasters' digitally-transmitted services to be received by viewers or listeners and keep separate financial accounts regarding their activity as CAS providers.[101]

6.2 Asymmetric Obligations

In addition to the symmetric obligations applicable to all undertakings meeting certain legal conditions, the asymmetric obligations apply to the undertakings for which NRAs have determined, after a market analysis, that they enjoy Significant Market Power ("SMP"). The SMP designation follows three steps and is inspired by the dominance determination in competition law:

- First, the NRA, on the basis of a Commission Recommendation and under the control of the Commission, *defines the markets* justifying the application of ex-ante regulation;[102]
- Second, the NRA, on the basis of a Commission Recommendation and under the control of the Commission *determines the undertakings enjoying an SMP position* on those markets;[103]
- Third, the NRA *imposes proportionate behavioural or structural remedies* on those SMP undertakings to prevent any abuse of such positions and to promote competition in the provision of electronic communications networks and services.[104]

If one or several providers of electronic communications network or service has been designated as having SMP on a retail or a wholesale market, the NRA should impose asymmetric

[99] EECC, art 61(3) and recital 152. The mere fact that more than one such infrastructure already exists should not necessarily be interpreted as showing that its assets are replicable. See also BEREC Report of 6 December 2018 on technical and economic replicability assessment in the context of symmetric access, BoR(18)214. For an analysis of the welfare effects of symmetric access, see Tony Shortall and Martin Cave, 'Is Symmetric Access Regulation a Policy Choice? Evidence from the Deployment of NGA in Europe' (2015) 98 Communications & Strategies 17.

[100] EECC, art 61(2d) and Annex II, Part II.

[101] EECC, art 62(1) and Annex II, Part I.

[102] EECC, arts 64–65; Commission Recommendation of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation [2020] OJ L439/23; Commission Guidelines of 27 April 2018 on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services [2018] OJ C159/1, Chapter 2 and the associated Commission Staff Working Document, SWD(2018) 124.

[103] EECC, art 63 and *id.* at Chapter 3 and the associated Commission Staff Working Document, SWD(2018) 124.

[104] EECC, art 67.

regulatory obligations. The choice of possible obligations should be based on the nature of the problem identified in the market analysis and justified in light of the four main EECC objectives.[105] In making this choice, there is a priority for wholesale obligations (i.e. imposed on the wholesale markets) over retail obligations and another priority for behavioural obligations over structural obligations.

With regard to wholesale behavioural obligations, the NRA may choose among a menu of five obligations listed in the EECC:

- *Transparency and reference offer*,[106] which contains a description of the relevant offerings broken down into components according to market needs and the associated terms and conditions. In most situations, a transparency obligation is not an effective remedy in itself, but is used to facilitate the implementation of other remedies, such as access and pricing obligations and, where necessary, impose changes to reference offers.
- *Prohibition to discriminate*, in particular between its own services or those of its subsidiaries or partners and access seekers.[107] Equivalence of access can be of two types: (i) the *Equivalence of Inputs* which means the provision of services and information to internal and third-party access seekers on the same terms and conditions, including price and quality of service levels, within the same time scales using the same systems and processes, and with the same degree of reliability and performance; or (ii) the *Equivalence of Output* which means the provision to access seekers of wholesale inputs comparable, in terms of functionality and price, to those the SMP operator provides internally to its own downstream businesses albeit using potentially different systems and processes. In order to monitor effectively compliance with the non-discrimination obligation, the NRA may impose the use of Key Performance Indicators (KPIs) in relation to the ordering process, the provision of service, the quality of service, or the fault repair times.
- *Accounting separation* in relation to specified activities related to interconnection or access.[108] NRAs may also require a vertically integrated SMP undertaking to make transparent its wholesale prices and its internal transfer prices. Accounting separation obligations assist the NRA in monitoring compliance with non-discrimination obligations and in setting cost-based tariffs for access and interconnection.
- *Access* to, and use of, civil engineering and network elements when denial of access hinders the emergence of a sustainable competitive market.[109] The concept of access may also cover open access to technical interfaces, protocols or other key technologies indispensable for the interoperability or specific services needed to ensure interoperability of end-to-end services to users. To preserve investment incentives, NRAs should take into account the investment and risks taken by the facility owner and the technical and economic viability for the access seeker of using or installing competing facilities. Moreover, the NRAs should favour the most upstream remedy first (such as access to civil engineering elements) where the possibility of duplication can be the smallest as the economies of scale and scope are the lowest.
- *Price controls and cost orientation* for the provision of specific types of interconnection or access when the lack of effective competition may lead to excessive prices or a price squeeze to the detriment of end-users.[110]

In the exceptional circumstances where the behavioural wholesale obligations failed to achieve effective competition and important market failures persist in relation to the provision of certain wholesale access product, the NRA may impose on a vertically integrated SMP undertaking an obligation to place its wholesale activities in an independent business entity. This wholesale unit should supply access products and services to all undertakings, including to other business entities within the parent company, on the same timescales, terms and conditions and by means of the same systems and processes, i.e., an equivalence of inputs.[111] As the imposition of functional separation is very intrusive, the NRA can only impose it after having done a thorough analysis of market prospects (in particular regarding the possibilities of infrastructure-based competition) and impact assessment as well as having obtained the prior approval by the Commission.[112]

A vertically integrated SMP operator may voluntarily decide to separate its wholesale and retail activities for financial reasons to attract investors willing to trade high margin for long-term security or regulatory reasons to reduce the obligations imposed by the NRA. In this case, the operator may transfer its local access network assets or a substantial part thereof to a separate legal entity under different ownership (vertical separation) or establish a separate business entity in order to provide all retail providers, including its own retail divisions, with fully equivalent access products (functional separation).[113] In those circumstances, the SMP operator should notify the NRA at least three months in advance of its separation plan and possible commitments regarding the access conditions applicable after the separation.[114] As such

[105] EECC, art 68.

[106] EECC, art 69 and BEREC Guidelines of 5 December 2019 on the minimum criteria for a reference offer relating to obligations of transparency, BoR(19) 238. A specific situation occurs when an SMP operator wants to decommission or replace with a new infrastructure parts of the network, in particular to switch-off its copper network. In such case, the operator should notify those plans to the NRA, which should ensure that the replacement process includes a transparent timetable and conditions (including an appropriate notice period for transition): EECC, art 81.

[107] EECC, art 70 and Commission Recommendation 2013/466 of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment [2013] OJ L 251/13.

[108] EECC, art 71 and Commission Recommendation 2005/698 of 19 September 2005 on accounting separation and cost accounting systems under the regulatory framework for electronic communications [2005] OJ L 266/64.

[109] EECC, arts 72 and 73.

[110] EECC, art 74(1). To determine the access prices, many regulators in the EU rely on the so-called ladder of investment theory: Martin Cave, 'The Ladder of Investment in Europe, in Retrospect and Prospect' (2014) 38 Telecommunications Policy 674.

[111] EECC, art 77(1). In addition, Commission Directive 2002/77/EC of 16 September 2002 on competition in the markets for electronic communications networks and services (Competition Directive) [2002] OJ L 249/21, art 8 imposes the legal separation between cable TV networks and other public electronic communications networks when the undertaking (i) is controlled by that Member State or benefits from special rights; (ii) is dominant in a substantial part of the common market in the provision of public electronic communications networks and publicly available telephone services; and (iii) operates a cable television network which has been established under special or exclusive right in the same geographic area.

[112] EECC, arts 77(2) and 68(3).

[113] On the different types of vertical separation, Martin Cave, 'Six Degrees of Separation' (2006) 64 Communications & Strategies 89.

[114] EECC, art 78(1). Moreover, if the operator deciding the vertical separation has been designated as a universal service provider, it should also notify, in advance and in a timely manner, the separation plans

separation affects substantially the market conditions, in particular by reducing the incentives of the wholesale company or entity to favour the retail arm of the SMP operator, the NRA should review the regulatory obligations that were imposed before the separation and amend or withdraw them if appropriate.[115] The NRA may also make binding, wholly or in part, the commitments of the operator for the entire period for which they are offered and, then, monitor the implementation of those commitments.[116]

According to the proportionality principle, the NRA should favour the imposition of obligations on the wholesale markets and should impose obligations on a retail market only when (i) such market is not effectively competitive; and (ii) the imposition of wholesale obligations could not solve the identified competition problem.[117] When those restrictive conditions are met, the NRA enjoys a large discretion in deciding which obligations to impose among the open list provided in the EECC. The NRA may impose retail tariff obligations such as the prohibition of excessive or predatory prices as well as the imposition of a price cap or cost-based prices. In those cases, necessary and appropriate cost-accounting systems should be implemented. The NRA could also prohibit undue preference to specific end-users and unreasonable bundles of services.[118] As always, obligations should be based on the nature of the problem identified, justified in light of the four main objectives of the EECC and proportionate.

6.3 Mechanisms to Foster Investment in New Very High Capacity Networks

As one of the objectives of the regulatory framework is the promotion of connectivity and access to, and take-up of, very high capacity networks, the EECC contains three new mechanisms to foster investments in such networks.

The first mechanism complements the existing obligation to meet reasonable requests for *access to physical infrastructures* under fair and reasonable terms with a view to deploying high-speed electronic communications networks, already required under the BCRD, by empowering NRAs to impose symmetric access to facilities up to, or even beyond, the first concentration point in order to avoid localised bottlenecks or inefficient network element duplication.[119]

The second mechanism consists in relaxing regulation of the SMP operators which open up the deployment of very high-capacity networks to *co-investment* (e.g. co-ownership or long-term risk sharing).[120] Such lighter regulatory regime can be obtained if the SMP co-investor make voluntary, but binding, commitments to the NRA which comply with the

to the competent authority. The authority then assesses the effects of the separation on the availability of universal service and adapt regulatory obligations accordingly: EECC, art 86(5).

[115] EECC, art 78(2).

[116] EECC, art 78(2) and (4) and recital 206.

[117] EECC, art 83(1). Those two limiting conditions only apply for the imposition of obligations aiming at solving competition problems and do not apply to obligations aiming at solving other issues, such as ensuring the universal service, protecting end-users against unfair practices or against excessive retail international roaming charges.

[118] EECC, art 83(2) and (3).

[119] EECC, art 61(3) and BEREC Guidelines of 10 December 2020 on the Criteria for a Consistent Application of Article 61 (3) EECC, BoR(20) 225.

[120] EECC, art 76, Annex IV and BEREC Guidelines of 11 December 2020 to foster the consistent application of the conditions and criteria for assessing new very high capacity network elements, BoR(20) 232. On the economics of co-investment, see Marc Bourreau, Carlo Cambini, Stefan Hoernig and Ingo Vogelsang 'Co-Investment, Uncertainty, and Opportunism: Ex-Ante and Ex-Post Remedies' 2020, CESifo Working Paper Series 8078.

[121] EECC, art 80.

[122] See Council Resolution of 7 February 1994 on universal service principles in the telecommunications sector [1994] OJ C 48/1.

following conditions. First, the offer to co-invest should (i) be open to all at any moment; (ii) be made public in a timely manner (in principle, six months before the start of the deployment); (iii) be made in good faith; and (iv) allow other co-investors to compete with the SMP operators in downstream markets, which implies access on FRAND terms to the full capacity of the network, flexibility in participation and reciprocal rights between co-investors. Second, the offer should grant transparent and non-discriminatory access to operators not participating in the co-investment. If those strict conditions are met, the NRA should make them binding for a minimum period of seven years and not impose additional obligations as regards the elements of the new very high capacity networks that are subject to the commitments when at least one potential co-investor has entered into a co-investment agreement.

The third mechanism consists in a lighter regulatory regime for *wholesale only operators*. A wholesale-only operator is only active on the wholesale markets and is not controlling or in exclusive contracts with undertakings or entities active on the retail markets, hence the operator does not have incentives to favour a particular retail operator.[121] On these operators, the NRA can only impose obligations related to non-discrimination and access (hence not related to transparency or accounting separation) and, when justified, relative to FRAND price control without going to the stricter cost-orientation obligation.

7 UNIVERSAL SERVICE AND MUST CARRY

A major principle underlying the liberalisation of the electronic communications sector was that a minimum level of "universal" services should be available to all EU citizens at an affordable price. In a monopoly environment, public communications operators cross-subsidised loss-making areas or customers with the revenues from more profitable ones. Concerns were expressed that, in a liberalised and competitive market, those operators would either pass on all the full costs of service provision to these areas or customers or cease to provide them at all. As a result, it was feared that those customers with special social needs (who generally have limited incomes) and/or living in rural areas (who are expensive to serve) might have been unable to afford those services or that operators would not be able to afford to continue serving them. The necessity of imposing universal service obligations defined at the EU level that could be financed from the telecommunication sector was therefore widely accepted as part of the liberalisation programme.[122] On top of this EU minimum, Member States were able to impose, according to their national preferences, additional services that should be affordable and available on their territories. However, those additional mandatory services should be financed with public funds and not from the telecommunications sector.

7.1 Universal Service

Under the EECC, the universal service consists of two components: adequate broadband internet access service and voice communications services at least at a fixed location. The EECC does not define a precise bandwidth that an "adequate broadband internet access" entails, but provides criteria on the basis of which each Member State should define a bandwidth adapted to its territory. The bandwidth should allow social and economic participation in the society and be capable of supporting at least a minimum set of 11 online services considered as essential (i.e., e-mail, search engines, basic training and education online tools, online news, e-commerce, job searching, professional networking, internet banking, e-government service use, social media and instant messaging and calls and video calls of standard quality).[123] As the harmonised European universal service is an evolving concept, the Commission may, with a delegated act, amend the minimum list of online services that should be supported by the broadband Internet connection.[124] More radically, the Commission must review the whole scope of universal service every five years in the light of social, economic and technological developments taking into account, *inter alia*, mobility and data rates and, when justified, propose changes to the European Parliament and the Council.[125]

The main characteristic of a universal service is that it should be affordable to all its beneficiaries. If a Member State establishes that retail prices for those services are not affordable, it should take measures to ensure the affordability by providing direct support to consumers with a low income or special social needs (for instance, with social allowances or vouchers) and/or by requiring all providers of broadband access and voice communication services to offer tariff options or packages different from those provided under normal commercial conditions (for instance, social tariffs or averaged tariffs for the whole the national territory).[126]

Thus, the EU universal service is mainly a social policy to ensure that the basic electronic communications services offered on the market remain affordable. However, in some areas, in particular the rural ones where the economies of scale and scope are lower than in more densely populated areas, the market may not even offer such basic communications services. To deal with those cases, the EECC aims to increase the private incentives to deploy networks and Member States may finance the deployment of infrastructures in the so-called white areas where there is no commercial case for such deployment.[127] Although a universal service is not the primary means to ensure network deployment and coverage, it serves as a backstop when private and public investment are not sufficient to ensure the availability everywhere of basic communications services. If a Member State concludes that neither the market nor public intervention mechanisms are likely to provide consumers in certain geographical areas with a connection capable of delivering adequate broadband internet access service and voice communications services, that Member State should determine the most efficient and appropriate approach for ensuring such availability, for instance by designating one or more providers that should offer the universal service.[128] In doing so, the Member State should respect the principles of objectivity, transparency, non-discrimination and proportionality and minimisation of market distortions.

[123] EECC, art 84 and Annex V.

[124] EECC, art 116.

[125] EECC, art 122(2).

[126] EECC, art 85.

[127] EU Guidelines of 19 December 2012 for the application of state aid rules in relation to the rapid deployment of broadband networks [2013] OJ C25/1. The EU contributes to the financing of the availability of wireless broadband hotspots through its "WIFI4EU" initiative: Regulation (EU) 2017/1953 of the European Parliament and of the Council of 25 October 2017 amending Regulations (EU) 1316/2013 and (EU) 283/2014 as regards the promotion of Internet connectivity in local communities [2017] OJ L286/1.

If the NRA calculates that the universal provision entails a net avoidable cost[129] and determines that this net cost represents an unfair burden,[130] the provider of the universal service is entitled to a financial compensation. The compensation mechanism may not result in the distortion of competition, should be notified to the Commission and should comply with the state aid rules.[131] Such compensation may be financed from public funds and/or funds raised from within the electronic communications sector.[132] If a Member State decides to establish a sectoral fund, it should be financed by all electronic communications networks and services operators which provide services in the territory of the Member State, and therefore include providers of fixed, mobile and cable TV networks and electronic communications services, including internet service. The funding mechanism must meet the good governance principles of avoiding or minimising market distortions, proportionality, non-discrimination and transparency.[133]

7.2 Must Carry Obligations

Next to the affordability and the availability of infrastructure services such as internet access and voice communications, Member States may also want to ensure the accessibility of key content. To do that, they may impose reasonable "must carry" obligations[134] for the transmission of specified radio and television broadcast channels[135] and related complementary

[128] EECC, art 86.

[129] EECC, art 89 and Annex VII. To determine the net avoidable cost, the NRA should calculate the difference between the net cost, including the cost of capital, borne by a designated undertaking when providing a universal service and when not providing such a service: Case C-518/14 *Český telekomunikační v T–Mobile and Vodafone Czech Republic* [2015] ECLI:EU:C:2015:657, paras 35 to 43; Case C-327/15 *TDC v Teleklagenævnet and Erhvervs – og Vækstministeriet* [2016] ECLI:EU:C:2016:974, para 71.

[130] The Court of Justice considers that a burden is unfair when it is excessive in view of the universal service provider's ability to bear it taking into account all the specific characteristics of such an undertaking, in particular the quality of its equipment, its economic and financial situation and its market share: Case C-222/08 *Commission v Belgium* [2010] ECLI:EU:C:2010:583, paras 49–50.

[131] Competition Directive 2002/77/EC, *supra* note 111, art 6(2).

[132] EECC, art 90. Most European countries have planned a sectoral funding approach to compensate for the cost of the universal service obligations: BEREC Update Survey of 24 February 2017 on the implementation and application of the universal service provisions – a synthesis of the results, BoR (17)41.

[133] EECC, art 90(2) and Competition Directive 2002/77/EC, *supra* note 111, art 6(1). Case C-49/19 *Commission v Portugal* [2020] ECLI:EU:C:2020:956.

[134] EECC, art 114(1).

[135] Television broadcast is defined by the Audiovisual Media Service Directive (art 1.e) as: "an audiovisual media service provided by a media service provider for simultaneous viewing of programmes on the basis of a programme schedule". In Case 336/07 *Kabel Deutschland v Niedersächsische Landesmedienanstalt für privaten Rundfunk* [2008] ECLI:EU:C:2008:765, paras 64 to 65, the Court of Justice decided that a determinative criterion for the concept is that broadcast of television programmes is

services.[136] Such obligation can be imposed on the providers of electronic communications networks and services used for the distribution of radio or television broadcasts to the public,[137] such as cable, IPTV, satellite and terrestrial broadcasting networks if a significant number of end-users of such networks and services use them as their principal means to receive radio and television broadcast channels.[138]

As must carry obligations limit the freedom movement of services and entail costs, Article 56 TFEU[139] and the EECC set strict conditions on the imposition of such obligations. They should (i) meet clearly defined general interest objectives such as the media pluralism which is linked to the fundamental freedom of expression;[140] (ii) be able to fulfil this objective;[141] (iii) be proportionate, which implies that the procedure to designate the programmes benefiting from must carry rights should be transparent and based on well-defined criteria;[142] and (iv) be non-discriminatory, in particular the award of must carry right must not, either in law or in fact, be subject to a requirement of establishment on the national territory.[143] Moreover, must carry obligations are subject to periodic review at least every five years in order to keep them

intended for reception by the public and that the concept may cover telemedia services such as teleshopping, while the manner in which the images are transmitted is not a determinative factor.

[136] In particular, accessibility services to enable appropriate access for end-users with disabilities and data supporting connected television services and Electronic Programme Guides.

[137] In The Court of Justice held that Member States can also impose must-carry obligations on undertakings which are not providing electronic communications networks and services, such as an undertaking which offers the live streaming of television programmes online (Case C-298/17 *France Télévisions v Playmédia and Conseil supérieur de l'audiovisuel (CSA)* [2018] ECLI:EU:C:2018:1017, para 22) or an undertaking rebroadcasting TV programmes over satellite networks owned by third parties (Case C-87/19 *TV Play Baltic v Lietuvos radijo ir televizijos komisija* [2019] ECLI:EU:C:2019:1063, para 30). In those cases, the specific conditions of art 56 TFEU apply.

[138] This condition should be proven by the authorities imposing the must carry obligations and not by the electronic communications providers wanting to alleviate such an obligation: Case C-134/10 *Commission v Belgium* [2017] ECLI:EU:C:2011:117, para 74.

[139] Case C-250/06 *UPC and Others v Belgium* [2007] ECLI:EU:C:2007:783, para 38.

[140] *Id.*at paras 40 to 42 and Case C-336/07, *supra* note 135 at paras 33 to 38.

[141] Case C-250/06, *supra* note 139 at para 43.

[142] Case C-250/06, *supra* note 139 at paras 44 to 47 and Case C-134/10, *supra* note 138 at paras 59 to 65 noting in particular that the designation should apply to specific programmes and not to broadcasters which may have some programmes justifying "must carry" rights and others not. In Case C-336/07, *supra* note 135, the Court of Justice clarified that there is no quantitative limit on the numbers of programmes which may benefit from must carry rights (see para 26) but that the national judge must determine whether the obligations imposed on the operator are economically reasonable (see paras 46 to 54). In Case C-87/19, *supra* note 139 at para.45, the Court of Justice also clarified that: *"Article 56 TFEU must be interpreted as not precluding the Member States from imposing a 'must carry' obligation to broadcast a television channel free of charge on undertakings which rebroadcast, by means of satellite networks owned by third parties, television programmes protected by a conditional access system and offer their customers television programme packages, provided (1) that that obligation to broadcast allows a significant number or percentage of end users of all of the means of broadcasting television programmes to access the channel benefiting from that obligation and (2) that account is taken of the geographical distribution of the end users of the services supplied by the operator on whom that 'must carry' obligation is imposed, of the fact that the latter rebroadcasts that channel unencrypted and of the fact that that channel is freely available online and via the terrestrial broadcasting network."*

[143] Case C-250/06 *supra* note 139 at paras 48 to 49 and Case C-134/10 *Commission v Belgium* [2011] ECLI:EU:C:2011:117, paras 66 to 67.

up-to-date with technological and market evolution and in order to ensure that they continue to be proportionate to the objectives to be achieved.[144]

As carrying programmes is costly, Member States may determine appropriate remuneration for the electronic communications providers subject to the must carry obligations. In this case, the remuneration should be non-discriminatory, determined on the basis of clear criteria and methodologies, proportionate and transparent.[145] In the absence of a national provision on remuneration, providers of radio or television broadcast channels and providers of electronic communications networks must agree contractually on the remuneration.

8 END-USERS RIGHTS

In addition to the general rules which protect consumers (i.e., natural person acting for purposes which are outside his or her trade, business, craft or profession), the EECC provides a new layer of protection justified by the particular importance, the specific characteristics and the complexities of the electronic communications networks and services.[146] The scope of the protection is also broader as it covers all end-users (i.e., a natural or legal person using or requesting – but not providing – a publicly available electronic communications service).[147] Thus, the consumers but also the undertakings which are not providers of electronic communications networks and services benefit from this enhanced protection unless the EECC provides otherwise.

Most of the obligations apply only to the providers of internet access and number-based interpersonal communications services although some obligations also apply to the providers of all electronic communications networks and services, thereby also including number-independent interpersonal communications services.[148] Finally, most of the end-users protection rules are maximum harmonisation which implies that, for the issues covered by the EECC, the Member States cannot maintain or introduce stricter or weaker rules on their territories.[149]

8.1 Empowering Users with Information and Switching Possibilities

In addition to the information obligation imposed by general consumer protection law,[150] the EECC obliges most providers of publicly available electronic communications services

[144] EECC, art 114(2).

[145] EECC, art 114(3).

[146] As the specific electronic communications protection rules are complementary, and not substitutes, to the general consumer protections rules, the latter continue to apply to the electronic communications sectors and should be enforced by the consumer protection authority: Case C-54/17 *Wind Tre and Others* [2018] ECLI:EU:C:2018:710, para 70.

[147] EECC, art 2(13) and art 14.

[148] EECC, art 98. However, providers which are microenterprises providing only number-independent interpersonal communications services are exempted from those obligations.

[149] EECC, art 101. The EECC provides exceptions for contract duration (art 105(1); information on consumption level (art 102(6)); bundled offers (art 107(5)); and the provision of facilities to control expenses (art 115).

[150] In particular by arts 5 and 6 of the Directive 2011/83 of the European Parliament and of the Council of 25 October 2011 on consumer rights [2011] OJ L 304/64, as amended and by arts 5 and 10 of the Directive 2000/31 of the European Parliament and of the Council of 8 June 2000 on certain

to give end-users the main relevant pre-contractual information to allow them to make their purchasing decisions i.e., the main characteristics of the services, the price, the duration of the contract, the compensation arrangements and the action to be taken in case of security incidents. To take into account the limited attention of the consumers, a concise and easily readable contract summary with the main information should also be provided free of charge to consumers, prior to the conclusion of the contract.[151]

Next to this pre-contractual information, the providers of internet access services or publicly available interpersonal communication services should give to the general public three types of information to help end-users to make their purchasing decisions: their contact details, a description of their services (including the main characteristics, price, customer assistance, standard contract conditions), and the dispute resolution mechanisms.[152] Moreover, at least one comparison tool enabling to compare and evaluate different offers should be accessible free of charge. With the same purpose, providers of internet access services and of publicly available interpersonal communications services should publish comprehensive, comparable, reliable, user-friendly and up-to-date information on the quality of their services.[153]

Once the contract is concluded, providers of internet access services or publicly available interpersonal communications services which are billed on the basis of either time or volume consumption, should offer consumers the facilities to monitor and control the usage of each of those services. Those facilities should include access to timely information on the level of consumption of services included in a tariff plan.[154]

Under the EECC, consumers and providers of publicly available electronic communications services are not allowed to conclude contracts of a duration longer than 24 months.[155] In case of automatic prolongation, the provider should inform about the prolongation before it takes effect and give best tariff advice on their services.[156] Moreover, end-users should be able to terminate the contract at any time with a maximum one-month notice period.[157] They are also entitled to terminate the contract without any costs in case of changes of contractual conditions which are not in their interest or imposed by law[158] or in case of significant continued or frequently recurring discrepancy between the actual performance and the performance indicated in the contract.[159]

In case of switching between Internet Services Providers, continuity of the internet access service should be ensured, unless this is technically not feasible, and the possible loss of services must be limited to a maximum of one working day.[160] Subject to technical feasibility, the ISPs should also provide, on request and free-of-charge, for e-mail forwarding or access to e-mails after termination of the contract.[161] In the case of switching between providers of number-based services, the end-users have the right to retain their numbers and having them ported to the new providers.[162] The switching should be carried out within the shortest possible time and the numbers should be ported within one working day.[163] The transferring provider should continue to provide the services until the services of the receiving provider are activated and the loss of service cannot exceed one working day.

The EECC also addresses a further possible obstacle to users switching: the lack of interoperability of consumer digital television equipment.[164] Digital television sets must, on the one hand, be capable of descrambling of digital television signals (namely, broadcasting via terrestrial, cable or satellite transmission) in accordance with a common European scrambling algorithm and, on the other hand, display signals that have been transmitted in the clear, provided that, in the event that such equipment is rented, the renter complies with the relevant rental agreement. In order to ensure that digital television sets with an integral screen of visible diagonal larger than 30 cm is usable with different providers of digital television services, these television sets must also be fitted with at least one open interface socket permitting simple connection of peripherals, and able to pass all relevant elements of a digital television signal, including the audio and video streams, conditional access information, service information, API information and copy protection information.

Finally, as consumers are increasingly purchasing bundles of services, in particular including telephony, internet and television, the EECC extends its end-users protection rules to all components of bundles when the latter comprises at least an internet access service or a publicly available number-based interpersonal communications service.[165] This extension is particularly useful for the application of the right of end-users to terminate their contract without costs.

legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce) [2000] OJ L 178/1.

[151] EECC, art 102(3) and Commission Implementing Regulation 2019/2243 of 17 December 2019 establishing a template for the contract summary to be used by providers of publicly available electronic communications services [2019] OJ L 336/274. See also BEREC Report of 6 December 2018 on contractual simplification, BoR(18)172.

[152] EECC, art 103(1) and Annex IX.

[153] EECC, art 104 and Annex X. Also: BEREC Guidelines of 6 March 2020 detailing Quality of Service Parameters, BoR(20) 53.

[154] EECC, art 102(5).

[155] EECC, art 105(1) although Member States may, as an exception to the maximum harmonisation clause, mandate shorter maximum contractual commitments periods.

[156] When the EECC was adopted, certain Member States regulated such rollover contracts. For example, in Germany, the maximum duration for rollover contracts was limited to 12 months. Under art 105(1), these diverging national restrictions can be maintained, in derogation to the full harmonisation objective under art 101.

[157] EECC, art 105(3).

[158] EECC, art 105(4). The Court of Justice decided that an increase of tariff in accordance with the Consumer Price Index compiled by a public institution and foreseen in the contract does not grant the subscriber the right to withdraw from the contract without penalty: Case C-326/14 *Verein für Konsumenteninformation v A1 Telekom Austria* [2015] ECLI:EU:C:2015:782, paras 27 to 29.

[159] EECC, art 105(5).

[160] EECC, art 106(1). Also, BEREC Report of 7 March 2019 on Terminating Contracts and Switching Provider, BoR(19)27.

[161] EECC, art 115(1) and Annex VI (B).

[162] EECC, art 106(2).

[163] EECC, art 106(5).

[164] EECC, art 113 and Annex XI.

[165] EECC, art 107. This expansion effect only applies to the EECC protection rules. The other contractual issues, such as the remedies applicable in the event of non-conformity with the contract, remain governed by the rules applicable to the respective component of the bundle, for instance by the rules of contracts for the sales of goods or for the supply of digital content.

8.2 Non-Discrimination and Net Neutrality

All providers of electronic communications networks or services are subject to an obligation similar to that of the Services Directive:[166] they should not apply different requirements or general conditions of access to, or use of, networks or services to end-users, for reasons related to the end-user's nationality, place of residence or place of establishment, unless such different treatment is objectively justified, for example due to differences in costs and risks.[167]

A more specific non-discrimination obligation is imposed by the Open Internet Regulation and the associated BEREC Guidelines[168] on providers of internet access services: these providers must treat all traffic equally irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used. On the basis of this Regulation, the Court of Justice clarified that zero-rating offers (ie, entitling users to use a specific volume of data without restriction, without any deduction being made from that data volume for using certain specific applications and services) are illegal when they are based on commercial considerations.[169] However, the Open Internet Regulation distinguishes between "best efforts" and "specialised services", defined as "services other than internet access services which are optimised for specific content, applications or services, or a combination thereof, where the optimisation is necessary in order to meet requirements of the content, applications or services for a specific level of quality".[170] Providers may offer both in parallel if (i) the network capacity is sufficient to provide such specialised services in addition to any internet access services provided; (ii) specialised services are not usable or offered as a replacement for internet access services; and (iii) there is no detrimental effect on the availability or general quality of internet access for end-users.

In addition, providers of internet access services may apply necessary measure in order to: (i) comply with EU or national law or orders by courts or public authorities (e.g., block illegal content); (ii) preserve the integrity and security of the network, services and end-users' terminal equipment (e.g., prevent misuse of a network and combat viruses, malware and denial of service attacks); or (iii) prevent or minimise network congestion that is temporary or exceptional. As regards legal measure, public authorities' discretion to request internet access services providers to block content is limited by the EECC, which provides that national measures regarding end-users' access to, or use of, services and applications through electronic communications networks should respect the Charter of Fundamental Rights of the EU and general principles of Union law. Thus, any measure that could limit the exercise of the rights

[166] Directive 2006/123 of the European Parliament and of the Council of 12 December 2006 on services in the internal market (Services Directive) [2006] OJ L376/36, art 20. Its art 2(2c) excludes electronic communications services from its scope.

[167] EECC, art 99.

[168] Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open Internet access and retail charges for regulated intra-EU communications [2015] OJ L 310/1, as amended, and BEREC Guidelines of 11 June 2020 on the Implementation of the Open Internet Regulation, BoR(20) 112. On the economics of net neutrality, see Shane Greenstein, Martin Peitz and Tommaso Valletti, 'Net Neutrality: A Fast Lane to Understanding the Trade-Offs' (2017) 30 Journal of Economic Perspectives, 127.

[169] Joint Cases C-807/18 and C-39/19, *Telenor Magyarország Zrt. V. Nemzeti Média- és Hírközlési Hatóság Elnöke* [2020] ECLI:EU:C:2020:708.

[170] Open Internet Regulation, *supra* note 11 at art 3(5). Examples of specialised services optimised for specific content are managed IPTV and high-definition video conferencing.

or freedoms recognised by the Charter may only be imposed if it is provided for by law, proportionate, necessary, and genuinely meets general interest objectives recognised by EU law or the need to protect the rights and freedoms of others.[171]

8.3 Security and Resilience

The EECC also imposes a series of obligations on providers of electronic communications networks and services (with certain exceptions depending on the obligations) which seek to protect public interests: to ensure uninterrupted access to emergency services and transmission of public warnings in case of catastrophic network breakdown or force majeure,[172] to give access to emergency services through emergency communications to the most appropriate Public Safety Answering Point ("PSAP"),[173] to transmit to their end-users public warnings regarding imminent or developing major emergencies and disasters,[174] to provide access free of charge to a service operating a hotline to report cases of missing children available on the number "116000".

In addition to the general rules on network and services security,[175] the EECC imposes specific obligations on providers of public electronic communications networks or services. They must take appropriate and proportionate technical and organisational measures to manage the risks posed to the security of networks and services[176] and notify security incidents to the competent authority in case these have a significant impact on the operation of the provider's networks or services.[177]

9 CONCLUSION

Media services could only develop in Europe if they can be delivered over electronic communications networks which are performant, of good quality and affordable. The provision of such networks was the main goal of the telecommunications liberalisation thirty years ago and the successive regulatory reforms which have been adopted since then. To do that, the EU

[171] EECC, art 100.

[172] EECC, art 108.

[173] EECC, art 109(2). The PSAP is defined as "a physical location where an emergency communication is first received under the responsibility of a public authority or a private organization recognised by the Member State": EECC, art 2(36).

[174] EECC, art 110(1) and BEREC Guidelines of 12 June 2020 on how to assess the effectiveness of public warning systems transmitted by different means, BoR(20) 115.

[175] In particular, the Directive 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union [2016] OJ L194/1 and Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46 (General Data Protection Regulation) [2016] OJ L199/1.

[176] EECC, art 40(1).

[177] EECC, art 40(2). The significance of the incident impact justifying the notification depends in particular on the number of users affected, the duration of the incident, its geographical spread, the extent to which the functioning of the network or service is affected and the impact on economic and social activities.

regulatory framework (i) reduces as much as possible the legal entry barriers by privileging light general authorisation over individual licences and by ensuring effective and harmonised radio spectrum management, (ii) reduces as much as possible the economic entry barriers by imposing symmetric and asymmetric access obligations to the networks of the operators controlling bottleneck facilities and interoperability between networks and services and (iii) protects end-users by guaranteeing the provision of a minimal universal service and by strengthening consumer protection rules to increase information and facilitating switching between providers.

However, over the years, the regulatory framework has become increasingly complex with additional, possibly conflicting, objectives and more detailed rules. That puts an important pressure on the national authorities which are in the first line to implement this regulatory framework. The success of the new EECC will very much depend on the quality of its implementation and therefore, on the professionalism of the national authorities in charge and their coordination with their counterparts in the other Member States of the EU. Such success will be assessed against the objectives of the rules, in particular the investment in new very high-capacity network and the development of an internal market for electronic communications and services.