

**Open Internet Access (EU) 2015/2120 Regulation: the relevance of  
net neutrality, main concepts and the importance of BEREC  
guidelines in its application**

**O Regulamento (EU) 2015/2120 respeitante ao acesso à internet aberta: a  
relevância da neutralidade da rede, principais conceitos e importância das  
linhas de orientação do ORECE na sua aplicação**

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**ABSTRACT:** Net neutrality debate has been gaining momentum over the years, particularly, since the beginning of this decade. As a result, policymakers have taken over this matter in very different approaches. As for today, United States of America has opted for a non-neutral internet, while European Union, India, and some South American countries (mainly Chile in 2011 and Brazil in 2014) are enforcing net neutrality by law. The digital revolution and the development of the internet, now crucial of our society, economy, and daily lives, has been raised in its natural context of neutrality. This paper gives an overall review of its relevance and how it unfolds some of the classic fundamental rights in the digital world, with an examination of the main concepts in the light of the Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access. We will follow the Guidelines elaborated by The Body of European Regulators for Electronic Communications (BEREC), for a standardized application of the Regulation through all European State Members. Finally, we will point out some concerns regarding the forthcoming review, expected for the 30th April 2019, as stated in Article 9 of the Regulation.

**KEYWORDS:** Net neutrality; EU 2015/2120 Regulation; BEREC; Guidelines; Open Internet; Digital Rights.

**RESUMO:** O debate sobre a neutralidade da rede tem vindo a ganhar força ao longo dos anos, particularmente desde o início desta década. Como resultado, os legisladores assumiram abordagens muito diferentes sobre a matéria. Hoje, os Estados Unidos da América optaram por uma internet não-neutra, enquanto a União Europeia, a Índia e alguns países da América do Sul (principalmente o Chile em 2011 e o Brasil em 2014) aplicam o princípio da neutralidade da rede como princípio legal. A revolução digital e o desenvolvimento da internet, agora cruciais para nossa sociedade, economia e vida quotidiana, surgiram num contexto natural de neutralidade. Este trabalho faz uma revisão geral da sua relevância e dos seus desdobramentos nalguns dos direitos fundamentais clássicos no mundo digital, com uma análise dos principais conceitos à luz do Regulamento (UE) 2015/2120 do Parlamento Europeu e do Conselho, de 25 de novembro de 2015, que estabelece medidas relativas ao acesso aberto à internet. Seguiremos as Linhas de Orientação elaboradas pelo Organismo de Reguladores Europeus das Comunicações Electrónicas (ORECE) para uma aplicação padronizada do Regulamento através de todos os Estados-Membros da União Europeia. Por último, salientaremos algumas preocupações relativas à próxima revisão, prevista para 30 de abril de 2019, de acordo com o artigo 9.º do Regulamento.

**PALAVRAS-CHAVE:** Neutralidade da rede; Regulamento UE 2015/2120; ORECE; Orientações; Internet Aberta; Direitos Digitais.

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## 1. The importance of a neutral internet for the 21<sup>st</sup> century's digital society

The concept of net neutrality is usually formulated as a general principle, according to which all data traffic that transits through the network must be treated in conditions of equality and non-discrimination, its natural state following the words of the creator of the term, Tim WU<sup>1</sup>. The ways of discrimination are represented by actions such as observing, monitoring, treating, classifying or performing any operations that promotes an arbitrary distinction in the speed or availability of the data traffic that is transmitted<sup>2</sup>. Such operations are only admitted when there is a concrete technical<sup>3</sup> measure necessary to provide a higher standard of quality of service (QoS)<sup>4</sup>. As COELHO DIAS FERNANDES has summed up: *"a network with limited resources, rush hour, diversity of functions, and unforeseeable events, requires management techniques that allow a degree of reliability and operationally that meets the needs of users"*<sup>5</sup>. Otherwise, users would perceive a poorer overall experience of the

<sup>1</sup> TIM WU, "Network Neutrality, Broadband Discrimination", in *Journal of Telecommunications and High Technology Law*, Vol. II, 2003, pp. 141-178. Available online: <https://ssrn.com/abstract=388863> (27.06.2018). P. 175: "At this point, the newness of the concept means much unavoidable vagueness as to its operation. It is easier to point out examples of application discrimination that seem unjustified than to elucidate a standard that nearly separates the legitimate from the suspect. For example, there remains much work to better define what the concepts of network neutrality and discrimination would fully entail as a regulatory matter, or even as a regulatory threat".

<sup>2</sup> With the exception that a court order may require this in a reasonable manner, and always in case by case basis.

<sup>3</sup> Here is a simplified upfront list of terms and acronyms. These are some abridged definitions of the concepts that will appear throughout the text, in the belief that it will serve for a more streamlined approach to this job:

- ISP: Internet Service Provider. Entity (usually, telecom companies) that provides an internet access connection (IAS).

- IAS: Internet access connection. As defined in the Regulation: "publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet".

- QoS: Quality of Service. End-users' perception of the correct functioning of a network or a service, based on the technical measurement of objective aspects such as packet loss, noise (in decibels), bit rate, transmission delay (in milliseconds), availability, jitter, etc. I.e: e-mails' transmission delay doesn't affect the quality of service, but it has a high impact on videoconferences, voice over IP calls or online gaming.

- Specialised service: a network service or content different from a IAS (Internet access connection), where the optimisation is necessary in order to meet requirements of the content, applications or services for a specific level of quality otherwise unattainable. Specialised services cannot be used as an excuse to circumvent the Regulation.

- CAP: Content and Applications Providers (or just CP, *content providers*). Sources for useful or desirable material or services online. Spotify, Euronews, Wikimedia, Amazon, Nintendo or Google are CAPs. Google is a CAP, as it provides content (Youtube) and applications (Maps) (as well as services, i.e.: Drive). There is no technical or legal distinction between content or application from the net neutrality standpoint, and that is why most of the literature simply refers just to "content providers".

- Application, contents, services. They all represent one single idea: programs, websites, and any online material that a person uses an IAS for. Users access internet in order to enjoy available goods and services. Thus, "content" is the most accurate term for the whole concept. Again, Google is a provider (CAP), and the applications, contents or services themselves are Drive, Mail, Maps, Scholar Youtube, Calendar, Hangouts, Keep, Books, Play, Blogger, Plus, etc.

- Users: any legal entity or person that uses an IAS. Virtually, any agent different from an ISP. That is, all those that can't provide IAS to third parties.

- NRA: National Regulation Agencies. Public entities that act as State supervisors over ISPs.

- BEREC: Body of European Regulators for Electronic Communications. European entity that coordinates the different NRAs and advises the European Commission.

- DPI: Deep Packet Inspection. A data management and filtering technique that scrutinises the content of the information that travels through a network, allowing to perform automatic operations such as controlling, blocking, throttling, filtering, etc. Common techniques used in reasonable network management only refer to packet headers, so a proper treatment can be provided, without the need of looking into the content of the packet.

<sup>4</sup> PAOLO DAMIANI, "Net neutrality e certezza del diritto nella disciplina dei servizi Quality of Services (QoS). Una comparazione tra le due sponde dell'Atlantico", in *Informatica e diritto*, XLII Annata, Vol. XXV, 2016, n. 1, pp. 77-94.

<sup>5</sup> JOSÉ MANUEL COELHO DIAS FERNANDES, "O contrato de fornecimento de acesso à internet e o princípio da neutralidade da rede: contributo para a regulação do ciberespaço", *RED (Revista Electrónica de Direito)*, Centro

internet. For instance, voice over IP (VOIP) calls need as less lag as possible, while the delivery of an e-mail doesn't need that level of network response at all. There's a need for a reasonable management of traffic, as it is necessary in order to guarantee the performance and the safety of the network. The point is that these operations should not be considered as a right for control, but more of a sort of duty for ISPs, as again COELHO DIAS FERNANDES has guessed<sup>6</sup>.

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

Recital 6 states that: "*End-users should have the right to access and distribute information and content, and to use and provide applications and services without discrimination, via their internet access service.*" Net neutrality has been set as a right for end-users, so it bears a duty for the ISPs: to not discriminate, as it can be read in Recital 8: "*When providing internet access services, providers of those services should treat all traffic equally, without discrimination, restriction or interference, independently of its sender or receiver, content, application or service, or terminal equipment. (...)*". As a result, management measures can only be limited to the conditions stated in art. 3.3, second subparagraph, so they are "reasonable". Specifically: "*Such measures shall be transparent, non-discriminatory and proportionate, and shall not be based on commercial considerations but on objectively different technical quality of service requirements of specific categories of traffic.*"<sup>7</sup>

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de Investigação Jurídico-Económica, Universidade do Porto, N.º1 (February), 2017, p. 43. Original in portuguese: "*Uma rede com recursos limitados, horas de ponta, diversidade de funções, e eventos imprevisíveis, necessita de técnicas de gestão que possibilitem um grau de fiabilidade e operacionalidade consentâneo com as necessidades dos utilizadores*". Available online: <https://www.cije.up.pt/content/o-contrato-de-fornecimento-de-acesso-%C3%A0-internet-e-o-princ%C3%ADpio-da-neutralidade-da-rede-contri> (07.09.2018).

<sup>6</sup> Ibidem, p. 43.

<sup>7</sup> The Regulation foresees these ordinary practices in art. 3.3, second subparagraph: "*The first subparagraph shall not prevent providers of internet access services from implementing reasonable traffic management measures. In order to be deemed to be reasonable, such measures shall be transparent, non-discriminatory and proportionate, and shall not be based on commercial considerations but on objectively different technical quality of service requirements of specific categories of traffic. Such measures shall not monitor the specific content and shall not be maintained for longer than necessary*". Moreover, recital 9 provides a richer explanation: "*The objective of reasonable traffic management is to contribute to an efficient use of network resources and to an optimisation of overall transmission quality responding to the objectively different technical quality of service requirements of specific categories of traffic, and thus of the content, applications and services transmitted. Reasonable traffic management measures applied by providers of internet access services should be transparent, non-discriminatory and proportionate, and should not be based on commercial considerations. The requirement for traffic management measures to be non-discriminatory does not preclude providers of internet access services from implementing, in order to optimise the overall transmission quality, traffic management measures which differentiate between objectively different categories of traffic. Any such differentiation should, in order to optimise overall quality and user experience, be permitted only on the basis of objectively different technical quality of service requirements (for example, in terms of latency, jitter, packet loss, and bandwidth) of the specific categories of traffic, and not on the basis of commercial considerations. Such differentiating measures should be proportionate in relation to the purpose of overall quality optimisation and should treat equivalent traffic equally. Such measures should not be maintained for longer than necessary*". One illustrative example can be found in Recital 17: "*(...) In mobile networks, traffic volumes in a given radio cell are more difficult to anticipate due to the varying number of active end-users, and for this reason an impact on the quality of internet access services for end-users might occur in unforeseeable circumstances. In mobile*

To sum up, Internet Service Providers (ISPs) should not be able to discriminate, nor even have a passive influence, that would allow them to privilege packets of information in order to provide them a priority over others, or deliberately influence traffic on the basis of commercial considerations<sup>8</sup>, but strictly on technical ones. This principle concerns the non-discrimination by content, country of origin, server, website, platform, protocol, port, operating system, application or hardware. This is just an open enumeration of examples of possible discriminative behaviours.

As its article 1.1 declares: *"This Regulation establishes common rules to safeguard equal and non-discriminatory treatment of traffic in the provision of internet access services and related end-users' rights."* The aforementioned considerations fit in the framework provided by this article 1.1.

Besides, in a different scope, and sustaining in a different legal and factual basis, Article 1.2 introduces another additional goal. It establishes that *"This Regulation sets up a new retail pricing mechanism for Union-wide regulated roaming services in order to abolish retail roaming surcharges without distorting domestic and visited markets"*. The mix of this two concepts under the same law and under the same article represents, in my opinion, a wrong approach, since they comprehend two different realms: functioning and technical management of the internet on one hand, and abroad consumers' rights (roaming pricing) on the other. In any case, Recital 1 provides a clarification of the goals that the European Union tries to achieve with this norm: *"This Regulation aims to establish common rules to safeguard equal and non-discriminatory treatment of traffic in the provision of internet access services and related end-users' rights. It aims to protect end-users and simultaneously to guarantee the continued functioning of the internet ecosystem as an engine of innovation. Reforms in the field of roaming should give end-users the confidence to stay connected when they travel within the Union, and should, over time, become a driver of convergent pricing and other conditions in the Union."*

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*networks, the general quality of internet access services for end-users should not be deemed to incur a detriment where the aggregate negative impact of services other than internet access services is unavoidable, minimal and limited to a short duration."* Besides these considerations, recital 10 states: *"Reasonable traffic management does not require techniques which monitor the specific content of data traffic transmitted via the internet access service"*, so DPI (deep packet inspection) techniques, which we will refer to, are not allowed.

<sup>8</sup> Recital 9: *"The objective of reasonable traffic management is to contribute to an efficient use of network resources and to an optimisation of overall transmission quality responding to the objectively different technical quality of service requirements of specific categories of traffic, and thus of the content, applications and services transmitted. Reasonable traffic management measures applied by providers of internet access services should be transparent, non-discriminatory and proportionate, and should not be based on commercial considerations. The requirement for traffic management measures to be non-discriminatory does not preclude providers of internet access services from implementing, in order to optimise the overall transmission quality, traffic management measures which differentiate between objectively different categories of traffic. Any such differentiation should, in order to optimise overall quality and user experience, be permitted only on the basis of objectively different technical quality of service requirements (for example, in terms of latency, jitter, packet loss, and bandwidth) of the specific categories of traffic, and not on the basis of commercial considerations. Such differentiating measures should be proportionate in relation to the purpose of overall quality optimisation and should treat equivalent traffic equally. Such measures should not be maintained for longer than necessary"*.

From a practical standpoint, net neutrality is not a goal itself but a mean<sup>9</sup>, in order to guarantee some of the basic constitutional and civil rights<sup>10</sup> of the modern State in the online environment. GRABER has stated: “*Net neutrality is no longer only a battle cry of a few Internet romancers but has evolved into a key value for contemporary society that is being institutionalised as a constitutional right.*”<sup>11</sup>

For instance, the right to free competition is violated when an ISP (Internet Service Provider), which also has a business section related to online content, blocks or slows down the websites or services of its competitors in the same market (for instance, audiovisuals)<sup>12</sup>, or requires them a toll to improve their speed within the ISP network<sup>13 14</sup>. It is a problem expressly recognised by the European Union<sup>15</sup>.

The rights of free speech and freedom of expression and information<sup>16</sup> are violated when the ISP has the ability to slow down or block the content that it discretionally considers as “non-priority”, allowing it to prioritize the media that may be part of its group of companies or have collaboration agreements<sup>17</sup>, to the detriment of those who do not have them, or not

<sup>9</sup> ANDREA RENDA, “Antitrust, regulation and the neutrality trap: A plea for a smart, evidence-based internet policy”, *Center for European Policy Studies (CEPS)*, No. 104 (April), 2015, pp. 1-20. Available online: [https://www.ceps.eu/system/files/SR104\\_AR\\_NetNeutrality.pdf](https://www.ceps.eu/system/files/SR104_AR_NetNeutrality.pdf) (28.06.2018).

<sup>10</sup> ARTURO J. CARRILLO, “Having Your Cake and Eating it Too? Zero-Rating, Net Neutrality and International Law”, *19 Stanford Technology Law Review*, No. 364, 2016, pp. 364-429. Available online: <https://ssrn.com/abstract=2746447> (28.08.2018).

<sup>11</sup> CHRISTOPH B GRABER, “Bottom-up constitutionalism: the case of net neutrality”, *Transnational Legal Theory*, 7:4, pp. 524-552. Available online (for purchase) at: <https://www.tandfonline.com/doi/full/10.1080/20414005.2017.1300678?scroll=top&needAccess=true>

<sup>12</sup> Spain has one of the clearest cases in the European Union. *El Mundo*, edition of May 22, 2018: “*Movistar is the worst company to watch Netflix*”, available at <http://www.elmundo.es/tecnologia/2018/05/22/5b042901468aeb91148b45d4.html>. According to the data provided by El Confidencial: <https://datos.elconfidencial.com/tabla-velocidad-conexion-netflix-espana/>, the analysis of the figures demonstrates a disproportionately lower performance of the Movistar network (the dominant operator in Spain) against the rest of companies. While the average of the ISPs in Spain offered a transfer rate of around 4 Mb per second (with a variation between companies less than ± 3'5%), Movistar only performed at 2.15 Mb per second, a decrease by nearly 50%. This problem has been detected in specialised forums during the last years <https://www.adslzone.net/2017/02/05/persisten-las-quejas-clientes-movistar-netflix/>. It is notable for the debate to point out that in May 2018, Netflix and Movistar reached a collaboration agreement (that supposedly settles down all prior confrontations): [https://elpais.com/economia/2018/05/24/actualidad/1527173921\\_654735.html](https://elpais.com/economia/2018/05/24/actualidad/1527173921_654735.html) (29.06.2018)

<sup>13</sup> <https://www.businessinsider.com/fcc-net-neutrality-repeal-will-lead-to-higher-prices-fewer-choices-2017-12?IR=T>: “*The repeal of the rules likely won't mean broadband providers will block your access to Google or slow Netflix so it's unwatchable. But the move likely will mean the providers will charge internet companies tolls to be able to send their content or services to you. Big companies like Amazon, Google, Facebook, and Netflix will be able to afford those tolls. But smaller internet companies could be boxed out.*”

<sup>14</sup> BARBARA VAN SCHEWICK, “T-Mobile’s Binge On Violates Key Net Neutrality Principles,” *Stanford Law School’s Center for Internet and Society Report, 2016*, 1-51. Available online: <https://cyberlaw.stanford.edu/downloads/vanSchewick-2016-Binge-On-Report.pdf> (29.06.2018)

<sup>15</sup> In 2014, the website of the European Commission for the Digital Single Agenda openly formulated the troubles caused by deliberate slowdowns in the traffic of competitors, as well as serious privacy problems and lack of transparency, among others -absence of competition, obstacles to innovation, degradation in the quality of the service, etc.-, derived from the lack of net neutrality. Moreover, it stated the number of affected people by 21% for fixed connections and 36% for mobile ones. The current content of the page has been updated, but the old version can be retrieved for consultation: <https://web.archive.org/web/20141112132648/https://ec.europa.eu/digital-agenda/en/net-neutrality-challenges> (01.07.2018)

<sup>16</sup> ROGELIO EDGARDO IRAHETA MORENO, “El derecho de libertad, en su modalidad de libertad de acceso a la información pública: ¿un valor superior o un derecho fundamental? Realidad y efectos en los estados democráticos”, doctoral thesis directed by Dr. Enrique Belda Pérez Pedrero, Facultad de Ciencias Jurídicas y Sociales Universidad de Castilla-La Mancha, Toledo, Spain, 2015. Available online: <https://ruidera.uclm.es/xmlui/handle/10578/8692> (01.07.2018)

<sup>17</sup> BERND HOLZNAGEL / SARAH HARTMANN, “The EU ‘open Internet access’ regulation and its impact on the digital press”, *Convergence: The International Journal of Research into New Media Technologies*, Vol. XXII, No. 5, 2016, pp. 488-493. Page: 492: “*The decimation of smaller or new press services that do not have the bargaining power to negotiate favourable transmission agreements will not only distort the economic market*

friendly media (for example, those that maintain a critical editorial line with the ISP or any of the companies in their group). For instance AT&T holds WarnerMedia since June 14, 2018<sup>18</sup>, being the CNN news channel part of its Turner Broadcasting System division. Same outcome of vertical integration<sup>19</sup> could occur, for instance, with HBO, that could be benefited over Netflix, its competitor, or force it to pay for not being discriminated.

By splitting communications between “priority” and “normal” lines, artificial barriers are generated to the entry of start-ups, small competitors, and new businesses models, placing obstacles to innovation, because if priority treatment is desired, an agreement with the ISP is needed<sup>20</sup>, while, if not achieved, the newcoming application or service is relegated to a second line, to the benefit of companies that do have collaboration agreements, fragmenting the internet from a whole into prepaid packages<sup>21</sup>. Obviously, this places the ISP in a position of enormous strength in the digital society. Moreover, artificial scarcity<sup>22</sup> for priority lanes could be generated from out of nowhere, with undesirable side effects on pricing. In the natural state of net neutrality (as it is currently in Europe), companies automatically compete right from the start on equal terms and in accordance with their own capabilities in the online market, without the need for special permits granted by the ISP. This fact also affects the way information is accessed by individuals, breaking their right to freely seek, receive, and impart information in a nondiscriminatory manner<sup>23</sup>.

A real case demonstration of these obstacles to competition and innovation through network control could be observed in the RedVoiss vs. Telefónica case, which happened in Chile in 2004. Chile has today become a pioneer in the protection of net neutrality by law<sup>24</sup>. RedVoiss

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*but also the journalistic competition. Without equal opportunities to communicate and disseminate opinions (Gersdorf, 2015: 16), the press's essential public watchdog function (European Court of Human Rights, 1985: 58) might be impeded."*

<sup>18</sup> <https://money.cnn.com/2018/06/14/media/att-time-warner-deal/index.html>;  
<https://www.nytimes.com/2018/06/14/business/media/att-time-warner-injunction.html> (01.07.2018)

<sup>19</sup> SHANE GREENSTEIN / MARTIN PEITZ / TOMMASO VALLETTI, “Net Neutrality: A Fast Lane to Understanding the Trade-offs”, *Journal of Economic Perspectives*, Vol. XXX, No. 2 (Spring), 2016, pp. 127–150. Page 145: “Internet service providers can decide to integrate into services other than delivery of data, like video on demand. There are two key questions for economic analysis of net neutrality. First, under what condition does vertical integration reflect some efficiency rationale, thus improving the experience of users? Second, in which circumstances does it lead to harm to the competitive process because users cannot access alternative content providers, who compete on an “uneven playing field?””. In Spain, Movistar (previously Telefónica) is the most dominant ISP, and it competes in the VoD market with its service “Movistar+”, and even they have their own in-house productions: “Movistar Originales”. <http://www.movistar.es/particulares/movistarplus/guia-rapida/contenidos-bajo-demanda/> (01.07.2018)

<sup>20</sup> ROBERT SOMOGYI, “The Economics of Zero-rating and Net Neutrality”, *CORE Discussion Papers*, Université catholique de Louvain, Center for Operations Research and Econometrics (CORE), 2017, pp. 1-24. P. 6: “Paid prioritization is a business practice involving an ISP granting faster access for users of a content provider’s data in exchange of a monetary payment. Allowing such an agreement could create the emergence of “fast-lanes” and “slow-lanes”, clearly violating the principle of net neutrality”. Available online: <http://www.lcii.eu/wp-content/uploads/2017/02/R.-Somogyi-teh-economics-of-zero-rating-and-net-neutrality.pdf> (01.07.2018)

<sup>21</sup> FRAGO KOURANDI / JAN KRÄMER / TOMMASO VALLETTI, “Net Neutrality, Exclusivity Contracts, and Internet Fragmentation”, *Information Systems Research* Vol. XXVI, No. 2, 2015, pp. 320-338. Although not for net neutrality as a complete solution to the internet fragmentation, this study states that a “no-exclusivity agreements” rule would be more efficient to eradicate the potential risk of the internet fragmentation. Net neutrality is considered a solution as well, but less efficient, which we agree with. However, an analyse of the effects of both possibilities limited to this concrete topic, would not be accurate, as Net Neutrality brings other protections that go beyond of just the internet fragmentation threat.

<sup>22</sup> JAY PIL CHOI / BYUNG-CHEOL KIM, “Net Neutrality and Investment Incentives”, *RAND Journal of Economics*, Vol. XLI 41, No. 3, 2010, pp. 446-471. Available online: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1285639](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1285639) (02.09.2018).

<sup>23</sup> ARTURO J. CARRILLO, ob. cit., p. 371.

<sup>24</sup> Law No. 20,453, which “Consecrates the principle of net neutrality for consumers and internet users” (original in Spanish: “Consagra el principio de neutralidad en la red para los consumidores y usuarios de

(a Voice Over IP operator) sued Telefónica in 2004 for deliberately blocking the IP ports that the company used to provide the VOIP service, undermining its quality and affecting the perception of customers, thus directly preventing any possibility of competition. On November 2, 2006, the Tribunal for the Defense of Free Competition ruled for RedVoiss in its lawsuit against Telefónica, for the latter carrying out practices contrary to free competition<sup>25</sup>. The Court stated that Telefónica was running a restrictive practice of free competition with the aim of limiting the entry of the RedVoiss company and other potential competitors into the market for the provision of telephony services<sup>26</sup>.

ISPs' ability to examine data packages in order to influent their treatment by throttling, slowdown, priority lines, blocking, or any kind of discrimination, entails necessarily an absolute surveillance of content by the use of the Deep Packet Inspection technique (DPI)<sup>27</sup>. This represents a serious threat, with a potential for a massive violation of the right to personal data protection, as well as the secret of communications and the right to privacy<sup>28</sup>. In the words of MARSDEN: "*A surveillance of this kind will not only go contrary to the right to confidentiality of communications, as well as privacy and personal data protection, but furthermore may seriously undermine consumer confidence*"<sup>29</sup>.

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internet"). Published in August 26, 2010. Through it, an amendment is made to the General Telecommunications Law No. 18.168, adding to art. 24, three new sections: H), I) and J), through which the principle of net neutrality is introduced in the Chilean legal system. The full text can be consulted at <https://www.leychile.cl/Navegar?idNorma=1016570> (01.07.2018)

<sup>25</sup> Case No. Rol C - 60/2005, Judgment 45/2006, of October 26, of the Tribunal for the Defense of Free Competition. Excerpt from the summary of the judgment: "The Court also considered that there are no technical or economic reasons that justify the imposition of the contractual clauses questioned. Therefore, the Court did not admit that CTC imposed contractual limitations to restrict competition in the fixed telephony business, even if they could have the purpose of protecting their investments in this market. Therefore, it sanctioned Compañía de Telecomunicaciones de Chile S.A., for having violated the rules on protection of free competition by imposing artificial barriers to entry to IP Telephony over broadband DSL. " The full text can be consulted at: [https://www.ucursos.cl/derecho/2010/2/D126A0630/5/material\\_docente/previstaizar?id\\_material=321523](https://www.ucursos.cl/derecho/2010/2/D126A0630/5/material_docente/previstaizar?id_material=321523) (01.07.2018)

<sup>26</sup> MARÍA DE LA LUZ DOMPER RODRÍGUEZ / VÍCTOR MANUEL AVILÉS HERNÁNDEZ, "Una mirada económica y jurídica al fallo Voissnet contra CTC y su impacto en el esquema de libre competencia chileno", in ARTURO FERNANDOIS VÖHRINGER, (editor): "*Anuario de Doctrina y Jurisprudencia. Sentencias destacadas de 2006*", *Libertad y Desarrollo*, 2007. Pp. 295-344. Available online at: <http://lyd.org/wp-content/uploads/2016/12/pp-299-349-Una-mirada-economica-y-juridica-al-fallo-Voissnet-contra-CTC-y-su-impacto-en-el-esquema-de-libre-competencia-chileno-MLDomper-VMAviles.pdf> (02.07.2018).

<sup>27</sup> RALF BENDRATH / MILTON MUELLER, "The end of the net as we know it? Deep packet inspection and internet governance", *New Media & Society*, Vol. XIII, No.7, 2011, Pp. 1142-1160. P. 1143: "*DPI introduces 'intelligence' into what has often been called a 'dumb' network, facilitating comprehensive surveillance and discrimination of data packets moving through the network. If broadly deployed, internet service providers (ISPs) who use DPI could more effectively monitor, speed up, slow down, block, filter, or otherwise make decisions about the traffic of their users, based on knowledge of what kind of information they are transmitting. This could potentially have a major impact on privacy, the free flow of information, intellectual property protection online, network security and virtually all other internet governance issues.*".

<sup>28</sup> JASMIN HAMMON, "Alterity and freedom of information on the Internet - The loss of Net Neutrality in contemporary literature", *SIGCAS Computers & Society (Special Issue on Ethicomp)*, Vol XLV, No.3 (September), 2015, pp 91-99. P. 93: "*Another technical innovation in the context of Net Neutrality threatens the Open Internet: the deep packet inspection (DPI), which is a tool of network management, through which an ISP can read the content of a data package in order to decide both the way and the speed it is routed. Very urgent data packages would be transferred first. So far, only the header has been read. With DPI, critics fear the violation of privacy and freedom of information, because DPI acts on all levels from 2 to 7 of the data package (levels of OSI reference model), in which the content of the data package is deposited. Abusers of this technology could read the concrete wordings of emails or commit other violations of privacy. This contradicts Article 12 of the Universal Declaration of Human Rights (UDHR) embodying the privacy of someone's home and communication. In Europe, deputies asked for DPI measures during the Net Neutrality debate, hoping to enhance the pursuit of child pornography and, less severe, copyright infringements*".

<sup>29</sup> CHRISTOPHER T. MARSDEN, "Network neutrality. From policy to law to regulation", Manchester University Press, Manchester, 2017. Page 132. This book is open access and is available for download at: <https://www.manchesteropenhive.com/view/9781526105479/9781526105479.xml> (08.07.2018)

In my opinion, it is difficult to imagine how a non-neutral internet could (or, in case of the USA, actually will<sup>30</sup>) improve the magnificent development that Internet and the digital world have experienced and brought to society during the last two decades.

Nonetheless, as BAUER and KNIPEP have pointed out, it is true that this innovation has been focused on the “applications” layer<sup>31</sup>, instead of the network technology itself. In other words, networks development has been driven by applications and their bandwidth needs<sup>32</sup>. As we will explain later on, Internet Service Providers (ISPs) and Content and Application Providers (CAPs) play absolutely different roles. But from the stated standpoint, the referred authors argue that net neutrality regulation might discourage network innovations and investments. That line could surely be agreed by ISPs, due to the fact that the main claim they stand is how they are charged with the costs of infrastructures, while others “benefit” of it<sup>33</sup>. Other economic analysts (CHOI and KIM) conclude that non-neutral network scenario disincentives investments. According to these authors: *“Once again, a question of interest is how the possibility of quality degradation affects the investment incentives of the ISP. With the possibility of quality degradation, the ISP need not be concerned anymore about the rent extraction effect that adversely affects its investment incentives to capacity expansion. Because the ISP is now free of the problem that the relative quality difference between the two CPs decreases as capacity expands, the possibility of quality degradation would increase ISPs’ incentives to expand capacity”*<sup>34</sup>. Thereby, the upcoming 5G wireless networks deployment rises one main question: shall we believe that Telecoms are actually assuming the investments in these next generation infrastructures at the expectation of a net loss because of net neutrality<sup>35</sup>? Given the fact that the placement of fixed broadband technology (mainly FTTH and VDSL) in a neutral internet ecosystem has been successfully undertaken in Europe during the last two decades<sup>36</sup>, combined with the so announced forthcoming of the

<sup>30</sup> However, disagreements of many States (up to 22), as well as political changes that may occur in the mid-term, could potentially lead to a switch of paradigms on this matter: <https://nypost.com/2018/08/21/22-states-ask-court-to-reinstate-net-neutrality-rules/>; <http://www.chicagotribune.com/95684088-132.html> (08.07.2018)

<sup>31</sup> JOHANNES M. BAUER / GUENTER KNIPEP, “Complementary Innovation and Network Neutrality” *Telecommunications Policy*, Vol. XLII, No 2, March, 2018, pp. 172-183. P. 181: *Designed to support innovation processes driven by activities at the application layer, strict network neutrality regulations may impede, bias, or even prevent innovation processes that emanate from the application side but require deterministic network QoS or innovation processes for which the momentum originates at the network layer. Consequently, policies intended to preserve innovation in the public Internet may inadvertently erode its role by creating incentives to migrate such innovations to separate (virtual) or private IP networks.*

<sup>32</sup> JAY PIL CHOI / DOH-SHIN JEON / BYUNG-CHEOL KIM, “Net Neutrality, Business Models, and Internet Interconnection”, *American Economic Journal: Microeconomics*, Vol. VII, No. 3, 2015, pp. 104–141. P. 104 – 105.

<sup>33</sup> LAWRENCE LESSIG, *The Future of Ideas*, Nova Iorque, Random House, Inc., 2001, p. 158.

<sup>34</sup> JAY PIL CHOI / KIM BYUNG-CHEOL, ob. cit., p. 465.

<sup>35</sup> ZORAIDA FRIAS / JORGE PÉREZ MARTÍNEZ, “5G networks: Will technology and policy collide?”, *Telecommunications Policy*, No. 42, 2018, pp. 612–621.

<sup>36</sup> BERND BECKERT, “Success factors for FTTH deployment in Europe: Learning from the Leaders”, 28th European Regional Conference of the International Telecommunications Society (ITS): “Competition and Regulation in the Information Age”, Passau, Germany, July 30 - August 2, 2017. Available at <https://www.econstor.eu/bitstream/10419/169449/1/Beckert.pdf> (09.07.2018). With some nuances: MARLIES VAN DER WEE et al., “Making a success of FTTH: learning from case studies in Europe”, *Journal of the Institute of Telecommunications Professionals*, Vol. V, Part 4, 2011, pp. 22-31.

Internet of Things<sup>37</sup> -smart objects that will need their own wireless communications<sup>38</sup>-, lead me to think that such “investment at a net loss” scenario is “unlikely”, to say the least.

However, all the economic value, new businesses models, rise and widespread of culture, software and network development, technological progress, and even the wealthy revenues that a neutral internet model has provided to the Internet Access Provider companies (telecoms), are a plain to see demonstration on how net neutrality has benefited<sup>39</sup> and enriched, not only the 21<sup>st</sup> century society as whole, but also the companies that betted on the innovation that internet represented as the technology of the future. This revolution has risen in this free environment, under the principle of “innovation without permission”<sup>40</sup>, with little-to-non-existent barriers for the entrance of new players in the ever-developing digital market<sup>41</sup>. Other authors also agree in this social welfare, but consider that it comes at a cost of “*efficiency and equity considerations*”<sup>42</sup>. That being true, it is obvious that, as no perfect choices exist in real life, every decision always have downsides<sup>43</sup>. The previously expressed social welfare points represent, for me, enough reasons to be for net neutrality. Jeopardizing them is, definitely, a greater cost. It seems clear that a non-neutral network provides a truly

<sup>37</sup> MARIA RITA PALATTELLA et al., “Internet of Things in the 5G Era: Enablers, Architecture, and Business Models,” in *IEEE Journal on Selected Areas in Communications*, Vol. XXXIV, No. 3 (March), 2016, pp. 510-527.

<sup>38</sup> ROSSITZA GOLEVA et al. “IoT Systems for 5G Environments”, in CONSTANDINOS X. AVROMOUSTAKIS / GEORGE MASTORAKIS / JORDI MONGAY BATALLA (Editors) “*Internet Of Things IoT In 5G Mobile Technologies*”, *Modeling and Optimization in Science and Technologies*, Vol. VIII, Springer, Switzerland, 2016, pp. 485-499. The whole book is filled with very interesting information in the application of 5G technologies to the Internet of Things ecosystem.

<sup>39</sup> Organisation for Economic Co-operation and Development (OECD) (2016): “Economic and Social Benefits of Internet Openness”, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP\(2015\)17/FINAL&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP(2015)17/FINAL&docLanguage=En) (11.07.2018).

<sup>40</sup> BARBARA VAN SCHEWICK, “Internet architecture and innovation in applications”, in JOHANNES M BAUER / MICHAEL LATZER (editors): “*Handbook on the Economics of the internet*” Edward Elgar Publishing, Cheltenham, United Kingdom, 2016. P. 298 and p. 306: “*Under an architecture based on the broad version of the end-to-end arguments, innovators independently choose which applications they want to pursue, without interference from network providers. Due to the generality of the network's core, they do not need support or 'permission' from network providers in order to realize their idea for an application ('innovation without permission'), and the application blindness of the network prevents network providers from interfering with these choices. By contrast, under architectures that deviate from the broad version, network providers may need to take action before an application can be realized. For example, if a network contains application-specific functionality in the network's core, the network may need to be changed before a new application can function on the network. In an application-aware architecture, the network can be closed to new applications by default. In such a network, the network provider needs to enable an application before it can run on the network. Depending on the architecture, contracting with a network provider may be the only way for potential innovators to realize their idea for an application. This may happen, for example, if the network's core contains a significant amount of application-specific functionality. The difference in control over application innovation affects the amount of innovation in various ways.*”

<sup>41</sup> This fact is also reflected in Recital 3 of the EU Net Neutrality Regulation: “*The internet has developed over the past decades as an open platform for innovation with low access barriers for end-users, providers of content, applications and services and providers of internet access services. The existing regulatory framework aims to promote the ability of end-users to access and distribute information or run applications and services of their choice. However, a significant number of end-users are affected by traffic management practices which block or slow down specific applications or services. Those tendencies require common rules at the Union level to ensure the openness of the internet and to avoid fragmentation of the internal market resulting from measures adopted by individual Member States.*”

<sup>42</sup> KEITH N. HYLTON, “Law, Social Welfare, and Net Neutrality”, *Review of Industrial Organization* (The Industrial Organization Society), Vol. L, No. 4 (June), 2017, pp. 417-429.

<sup>43</sup> WINSTON J. MAXWELL, “Smart(er) Internet Regulation Through Cost-Benefit Analysis: Measuring harms to privacy, freedom of expression, and the internet ecosystem”, Presses des Mines, Paris, 2017 P. 120: “*After looking at the costs, and if possible quantifying them, regulators must look at the benefits of the relevant practice. Benefits of a potentially unfair practice are equal to the costs associated with stopping or regulating the practice. This means that regulators must consider two situations: a situation where the practice is unregulated, and a situation where the practice is regulated or prohibited, and compare the two situations. The difference between these two situations is the opportunity cost of the regulation, or put differently, the benefit of no regulation.*”

powerful position to telecoms, in exchange for absolutely nothing in return<sup>44</sup>, placing them in control<sup>45</sup> over one of the most important technologies of our era: internet<sup>46</sup>. Now, in the United States, individuals, businesses, innovation projects, or even emergency services agents<sup>47</sup> need to ask for a special permission for a concrete use of the internet. As a result, for my understanding, this causes a clear undermine of liberty itself.

## 2. Basic concepts for a neutral internet under the BEREC guidelines

Now diving into the net neutrality details, the starting point would be article 1.1 of EU Net Neutrality Regulation, that provides a general framework, and is meant to set the goals to pursue in an adequate interpretation of the law. However, the prevision of Article 5.3<sup>48</sup>, along with some vague writing in certain main aspects of the law, as well as the technical complexity of the functioning of the internet, has set the necessity of developing a complementary document that provides concrete interpretations and specific implementations of the regulation to be followed by the ISPs (providers of the access to the internet) and the NRAs (National Regulatory Authorities, public entities that surveil them) of the different States of the European Union<sup>49</sup>.

The entity that has de responsibility of such task, is the Body of European Regulators for Electronic Communications (BEREC), established by Regulation (EC) No 1211/2009 of the

<sup>44</sup> The argumentation that ISPs defend goes from the need to monetize their investments in order to keep innovating and reaching new towns and places, to a supposedly unfair enrichment of content (Netflix, Spotify) and applications (Facebook, Skype) providers, since they would be benefiting from the infrastructures at no cost and no risk at all, being the telecoms the ones carrying the investments and maintenance that the networks need to work properly and reach as many people as possible. It is plain to see that telecoms make money (or, more precisely, benefits, as we stated earlier) out of citizens willing to pay for a service that has interesting content for them in the first place. Providing Internet Access Services is, definitely a profitable activity.

<sup>45</sup> According to the Cisco Systems' report "The Zettabyte Era: Trends and Analysis", in 2016 over 1'2 zettabytes (10<sup>21</sup> bytes) were transmitted through IP protocol. That's 1.200.000.000.000.000 megabytes. By 2021, it is expected to reach 3'3 Zbytes. It is worth noting that the zettabyte is the penultimate scale conceived for data measurement, only below the yottabyte (10<sup>24</sup> bytes). Available online at: <https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/vni-hyperconnectivity-wp.pdf> (07.09.2018).

<sup>46</sup> ISABEL VICTORIA LUCENA CID, "El derecho de acceso a internet y el fortalecimiento de la democracia", *Revista Internacional de Pensamiento Político* - I Época, Vol. IX, 2014, pp. 383-398.

<sup>47</sup> Being aware of the fact that appealing to the forecoming kind of news is somehow opportunist, a proof of the non-desirable effects of the lack of net neutrality was, unfortunately, witnessed with the California wildfire in July 2018. As has been reported, "Verizon throttled fire department's "unlimited" data during California wildfire. Fire dep't had to pay twice as much to lift throttling during wildfire response" (<https://arstechnica.com/tech-policy/2018/08/verizon-throttled-fire-departments-unlimited-data-during-calif-wildfire/>), an information that Verizon itself has already admitted (<https://www.washingtonpost.com/technology/2018/08/22/verizon-says-it-shouldnt-have-throttled-california-firefighters-during-wildfire-emergency/>; <https://eu.usatoday.com/story/tech/news/2018/08/22/verizon-throttled-unlimited-data-calif-fire-department-during-wildfire/1059486002/>). Quote from Anthony Bowden, Santa Clara County Fire Chief: "This throttling has had a significant impact on our ability to provide emergency services. Verizon imposed these limitations despite being informed that throttling was actively impeding County Fire's ability to provide crisis-response and essential emergency services".

<sup>48</sup> "By 30 August 2016, in order to contribute to the consistent application of this Regulation, BEREC shall, after consulting stakeholders and in close cooperation with the Commission, issue guidelines for the implementation of the obligations of national regulatory authorities under this Article."

<sup>49</sup> CHRISTOPHER T. MARSDEN, (2017): Page 132: "Can consumers trust the German or Cyprus NRA to get that technical judgment correct? Does BEREC have the competence to help them? That remains to be seen, as BEREC will have to clarify the application of the law. The lack of clarity in the Regulation means that the guidance in the BEREC Guidelines in 2016 will be eagerly awaited (...)".

European Parliament and of the Council of 25 November 2009, as part of the Telecom Reform package. It replaced the European Regulators Group for electronic communications networks and services, created back in 2002 as an advisory group to the Commission. Among its duties, the aforementioned Regulation points 14 concrete actions (letters a) to n) in article 3.1<sup>50</sup>), apart from its main role, separately stated in the article 2<sup>51</sup>. The elaboration of the Guidelines we will refer to in the next pages, is one of the tasks attributed in Article 1, letter a): “[to]develop and disseminate among NRAs regulatory best practice, such as common approaches, methodologies or guidelines on the implementation of the EU regulatory framework”. Before we continue, it is crucial to remind that, although the BEREC holds a privileged hierarchic role over the national regulatory authorities (NRAs), its decisions are not enforceable on their own. Article 3.3 provides a quite improvable description about this matter: “NRAs and the Commission shall take the utmost account of any opinion, recommendation, guidelines, advice or regulatory best practice adopted by BEREC”. It will surely inform the Commission and the different NRAs, but definitely, not directly mandate over them, and therefore, so they are not strictly tied to it. That being said,

<sup>50</sup> Article 3:

“1. The tasks of BEREC shall be:

(a) to deliver opinions on draft measures of NRAs concerning market definition, the designation of undertakings with significant market power and the imposition of remedies, in accordance with Articles 7 and 7a of Directive 2002/21/EC (Framework Directive); and to cooperate and work together with the NRAs in accordance with Articles 7 and 7a of Directive 2002/21/EC (Framework Directive);  
 (b) to deliver opinions on draft recommendations and/or guidelines on the form, content and level of details to be given in notifications, in accordance with Article 7b of Directive 2002/21/EC (Framework Directive);  
 (c) to be consulted on draft recommendations on relevant product and service markets, in accordance with Article 15 of Directive 2002/21/EC (Framework Directive);  
 (d) to deliver opinions on draft decisions on the identification of transnational markets, in accordance with Article 15 of Directive 2002/21/EC (Framework Directive);  
 (e) on request, to provide assistance to NRAs, in the context of the analysis of the relevant market in accordance with Article 16 of Directive 2002/21/EC (Framework Directive);  
 (f) to deliver opinions on draft decisions and recommendations on harmonisation, in accordance with Article 19 of Directive 2002/21/EC (Framework Directive);  
 (g) to be consulted and to deliver opinions on cross-border disputes in accordance with Article 21 of Directive 2002/21/EC (Framework Directive);  
 (h) to deliver opinions on draft decisions authorising or preventing an NRA from taking exceptional measures, in accordance with Article 8 of Directive 2002/19/EC (Access Directive);  
 (i) to be consulted on draft measures relating to effective access to the emergency call number 112, in accordance with Article 26 of Directive 2002/22/EC (Universal Service Directive);  
 (j) to be consulted on draft measures relating to the effective implementation of the 116 numbering range, in particular the missing children hotline number 116000, in accordance with Article 27a of Directive 2002/22/EC (Universal Service Directive);  
 (k) to assist the Commission with the updating of Annex II to Directive 2002/19/EC (Access Directive), in accordance with Article 9 of that Directive;  
 (l) on request, to provide assistance to NRAs on issues relating to fraud or the misuse of numbering resources within the Community, in particular for cross-border services;  
 (m) to deliver opinions aiming to ensure the development of common rules and requirements for providers of cross-border business services;  
 (n) to monitor and report on the electronic communications sector, and publish an annual report on developments in that sector.”

<sup>51</sup> BEREC shall:

“(a) develop and disseminate among NRAs regulatory best practice, such as common approaches, methodologies or guidelines on the implementation of the EU regulatory framework;  
 (b) on request, provide assistance to NRAs on regulatory issues;  
 (c) deliver opinions on the draft decisions, recommendations and guidelines of the Commission, referred to in this Regulation, the Framework Directive and the Specific Directives;  
 (d) issue reports and provide advice, upon a reasoned request of the Commission or on its own initiative, and deliver opinions to the European Parliament and the Council, upon a reasoned request or on its own initiative, on any matter regarding electronic communications within its competence;  
 (e) on request, assist the European Parliament, the Council, the Commission and the NRAs in relations, discussions and exchanges with third parties; and assist the Commission and NRAs in the dissemination of regulatory best practices to third parties.”

most of times, BEREC operates as a supervisor over NRAs, meaning that, in practice, NRAs and Commission usually follow BERECs instructions.

Having stated the legal framework wherein BEREC deploys its functions, now we will approach to some of the main points contained in its Guidelines on the Implementation by National Regulators of European Net Neutrality Rules, published in august 30<sup>th</sup>, 2016, in application of Article 5(3) of the Net Neutrality Regulation.

The Guidelines is a 45 pages document, available at BEREC's official website<sup>52</sup>, that focuses the most on the articles 3, 4 and 5. This is explained by two main reasons: these articles have an important extension of text by themselves; and they provide content that has to be implemented from a technical standpoint, and therefore obligates the BEREC to drive its efforts in assuring an standardised deployment along all EU countries. Besides these reasons, and as we already mentioned, clarification on some vague concepts was critically needed, so the effects of the Regulation could really achieve the goals that it seeks.

First off, the BEREC clarifies four key terms that must be well defined in order to understand their interactions and, consequently, the basic functioning of net neutrality.

— Application: *"a short expression for more lengthy expressions from the Regulation, like 'applications and services', 'content, application and service'".* Within this term lay a big portion of the actions that consumers perform in their interaction and usage of the internet. The importance of this clarification is to separate "applications" (that is, a general term for all content available in any form, like social networks, video on demand platforms, videogames, forums, APPs, etc.) from any other concept. For instance, Facebook, Netflix, Steam, Skype, Youtube, Euronews, Whatsapp, Reddit, PlayStation Network, or LinkedIn all fall under the term "applications".

— Content and Application Provider (CAPs): *"[they] make content (e.g. web pages, blogs, video) and/or applications (e.g. search engines, VoIP applications) and/or services available on the Internet. CAPs may also make content, services and applications available via specialised services".* This is a term related to the prior. It refers to the creators of "applications", in the sense given *ut supra*. Google as a company is a Content Provider, while Google Mail, Play Store, Youtube, Google Drive or Google Maps are those "applications" (contents and services) provided by it. The key of this definition is the mention of the "specialised services" as an opposed concept. In other words, it pursues to create a clear distinction from general applications and services used in regular internet service accesses. This same concept is commonly referred as just CPs (content providers) in most scholar and research bibliography.

— Specialised service: *"In these Guidelines, BEREC uses the term 'specialised services' as a short expression for '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' (ref. Article 3(5))".* One of the main rules for these kind of connections is that

<sup>52</sup>[https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/regulatory\\_best\\_practices/guidelines/6160-berec-guidelines-on-the-implementation-by-national-regulators-of-european-net-neutrality-rules](https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/6160-berec-guidelines-on-the-implementation-by-national-regulators-of-european-net-neutrality-rules) (01.09.2018).

"Specialised services are not permissible if they are to the detriment of the availability and general quality of the IAS". While the aforementioned applications (Youtube, Google Drive, Play Store, etc.) run on any internet connection, specialised content cannot do so. In specialised services, a communication between machines is created through the net infrastructures as well, but with a configuration that provides a concrete optimisation that makes possible a service or application with a level of quality otherwise impossible.

For instance, it could be an almost-non-lag-existent connection that could be needed for an emergency surgery to a patient hundreds of kilometres away<sup>53</sup>; or a ISDN connection for radio broadcasting. The key feature of these services is that there is an optimisation that is objectively necessary in order to meet requirements for a specific level of quality. According to BEREC, machine to machine (M2M) networks can also be considered as a specialised service in some cases, like a provider of energy using a smart consumption meter. This is a residual category, but that does not mean it has no importance at all. It is due to a vast majority of traffic categories not suitable to be considered "specialised services", being this concept exceptional, and left only to truly specific technical scenarios. For instance, following the M2M example, VIDA FERNÁNDEZ<sup>54</sup> has pointed out that if M2M get the consideration of specialised services, the Internet of Things (IoT) would be non-neutral by basis. That would cause an effect contrary to the goals of the Regulation. These kinds of issues shall be clarified by BEREC in future guideline updates or even by amendments in the Regulation.

— ISP (Internet Service Provider): "In these Guidelines, BEREC uses the term "ISP" to refer to providers of internet access services (IAS). ISPs may also be providers of specialised services". It is forbidden for ISPs to use the "specialised service" concept as an excuse to circumvent the Regulation, as recital 16 states<sup>55</sup>. An ISP is also a form of "provider of electronic communications to the public", a concept contained in art. 2.1 of the Regulation. According to it, ISPs respond to the definition of "providers of electronic communications to the public", as long as it is considered "an undertaking providing public communications networks or publicly available electronic communications services". ISPs provide internet access services, but also, specialised services as well, since they technically manage and are responsible for providing electronic communication networks and/or services.

These four ("application", "CAP", "ISP", and "specialised services") are the only terms detailed by BEREC guidelines in the epigraph dedicated to definitions (page 3). However, we consider that there are other terms that need an interpretation that merges with the regulation of a neutral internet as a whole.

<sup>53</sup> [https://berec.europa.eu/eng/netneutrality/specialised\\_services/](https://berec.europa.eu/eng/netneutrality/specialised_services/) (18.07.2018).

<sup>54</sup> JOSÉ VIDA FERNÁNDEZ, "Las garantías para el acceso a una internet abierta en el reglamento (UE) 2015/2120: una batalla perdida para la neutralidad de la red", in Revista General de Derecho Europeo, no. 40, 2016, pp. 96-124. Pp. 123-124.

<sup>55</sup> Recital 16: "There is demand on the part of providers of content, applications and services to be able to provide electronic communication services other than internet access services, for which specific levels of quality, that are not assured by internet access services, are necessary. Such specific levels of quality are, for instance, required by some services responding to a public interest or by some new machine-to-machine communications services. Providers of electronic communications to the public, including providers of internet access services, and providers of content, applications and services should therefore be free to offer services which are not internet access services and which are optimised for specific content, applications or services, or a combination thereof, where the optimisation is necessary in order to meet the requirements of the content, applications or services for a specific level of quality. National regulatory authorities should verify whether and to what extent such optimisation is objectively necessary to ensure one or more specific and key features of the content, applications or services and to enable a corresponding quality assurance to be given to end-users, rather than simply granting general priority over comparable content, applications or services available via the internet access service and thereby circumventing the provisions regarding traffic management measures applicable to the internet access services."

In order to connect to the internet, access must be provided. According to article 2.2 of the Regulation: *"Internet access service" means a publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used.*" In this definition, one of the main principles of net neutrality is secured: device and technological equality in the access and use of the internet. This configuration guarantees, for instance, that an agreement between an ISP and a determined hardware manufacturer will not cause other competitors' devices to underperform. Such distinction would create a breach between users and consumers, affecting their freedom of choice. Data flow must remain equal regardless of the hardware used<sup>56</sup> (excepting the proportionate measures introduced at the beginning of this work).

That drives us to the "users" and "consumers" concepts. The Net Neutrality Regulation only provides two definitions on its own ("provider of electronic communications to the public" and "internet access service"). The other concepts are referred to the ones contained in the Article 2 of Directive 2002/21/EC, for a common regulatory framework for electronic communications networks and services (Framework Directive), which gathers up to 16 definitions. Examining them all individually exceeds the boundaries of this work. However, user and consumer definitions cannot be passed by, not only because the Net Neutrality regulation directly pursues to reach and empower the end-user (Recital 18)<sup>57</sup>, but also because the role and consideration of CAPs in a neutral network is deeply related to them.

The term "user" is defined (art. 2.h) as: *"a legal entity or natural person using or requesting a publicly available electronic communications service"*. As a separate concept, "consumer" (art. 2.i): *"means any natural person who uses or requests a publicly available electronic communications service for purposes which are outside his or her trade, business or profession"*. "User" is a more general term applied for both companies and persons. Meanwhile, "consumer" carries a note of end-user, in the sense contained in Directives 2011/83/UE, 93/13/EEC and 1999/44/EC of the European Parliament and of the Council on consumers' rights, with the high standard of protections that come with them<sup>58</sup>. Moreover, as

<sup>56</sup> Recital 5: *"When accessing the internet, end-users should be free to choose between various types of terminal equipment as defined in Commission Directive 2008/63/EC. Providers of internet access services should not impose restrictions on the use of terminal equipment connecting to the network in addition to those imposed by manufacturers or distributors of terminal equipment in accordance with Union law."*

<sup>57</sup> Recital 18: *"The provisions on safeguarding of open internet access should be complemented by effective end-user provisions which address issues particularly linked to internet access services and enable end-users to make informed choices. Those provisions should apply in addition to the applicable provisions of Directive 2002/22/EC of the European Parliament and of the Council and Member States should have the possibility to maintain or adopt more far-reaching measures. Providers of internet access services should inform end-users in a clear manner how traffic management practices deployed might have an impact on the quality of internet access services, end-users' privacy and the protection of personal data as well as about the possible impact of services other than internet access services to which they subscribe, on the quality and availability of their respective internet access services. In order to empower end-users in such situations, providers of internet access services should therefore inform end-users in the contract of the speed which they are able realistically to deliver. The normally available speed is understood to be the speed that an end-user could expect to receive most of the time when accessing the service. Providers of internet access services should also inform consumers of available remedies in accordance with national law in the event of non-compliance of performance."*

<sup>58</sup> ALICIA ARROYO APARICIO, "Noción de consumidor para el Derecho Europeo (Noción del Reglamento 1215/2012 versus la de las Directivas de protección de los consumidores)", *RED (Revista Electrónica de Direito)*, Centro de Investigação Jurídico-Económica, Universidade do Porto, N.º1 (February), V. 15, 2018. Available online at:

Recital 18 reminds, the Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) applies, specifically, Chapter four (labelled "end-user interests and rights"). However, I find more suitable the concepts and definitions of 2002/21/EC, that defines the term end-user in art. 2.n) as "a user not providing public communications networks or publicly available electronic communications services".

Besides the importance of these three definitions on their own, the key point about them is to establish the context of freedom and protection that CAPs enjoy as "users". The BEREC has explained the connection between these in the Guidelines: "*end-user' means a user not providing public communications networks or publicly available electronic communications services. In turn, 'user' means a legal entity or natural person using or requesting a publicly available electronic communications service. On that basis, BEREC understands 'end-user' to encompass individuals and businesses, including consumers as well as CAPs.*"<sup>59</sup> As bumbling as it might seem, this is another feature that secures a neutral and equal treatment of traffic. Sometimes, they do it as businesses companies, pursuing an economical profit, but not always. Other times, CAPs are just mere providers of applications and contents like, for instance, Wikipedia, Firefox, Linux, LibreOffice or Wayback Machine. CAPs just operate as individuals, since they both are in need of a publicly available electronic communications service, that is controlled and provided by ISPs.

Thanks to this alignment, both genuine consumers as end-users and CAPs have the opportunity to reach each other without any sort of discrimination, creating a free ecosystem where they can match solely depending on their interests, without artificial discriminations or restrictions on new creations or innovative contents and applications. An even field in a dynamic and highly adaptable environment that evolves naturally according to the needs and interests of consumers and CAPs.

Telecom industry opposed to the broadening of the end-user concept, so it would cover both consumers and CAPs, as it was shown in the "public consultation on draft BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality rules"<sup>60</sup> document. In a nutshell, Telecom industry argued that expanding the end-user treatment to both, CAPs and consumers, "(...) imply that both the definitions 'user' and 'end-user' are covered within the scope, meaning that the rights of individuals, businesses, including consumers as well as CAPs are protected under the Guidelines. (...) the Regulation uses the term 'end-users' and it

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<https://www.cije.up.pt/content/noci%C3%B3n-de-consumidor-para-el-derecho-europeo-noci%C3%B3n-del-reglamento-12152012-versus-la-de-las> (31.08.2018).

<sup>59</sup> BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality Rules. P. 4, paragraph 4. "*According to the Framework Directive, 'end-user' means a user not providing public communications networks or publicly available electronic communications services. In turn, 'user' means a legal entity or natural person using or requesting a publicly available electronic communications service. On that basis, BEREC understands 'enduser' to encompass individuals and businesses, including consumers as well as CAPs.*"

<sup>60</sup> [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/reports/6161-berec-report-on-the-outcome-of-the-public-consultation-on-draft-berec-guidelines-on-the-implementation-by-national-regulators-of-european-net-neutrality-rules](https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/6161-berec-report-on-the-outcome-of-the-public-consultation-on-draft-berec-guidelines-on-the-implementation-by-national-regulators-of-european-net-neutrality-rules) (01.09.2018).

*is incorrect to widen its scope to also include CAPs.*" In other words, they defended that different agents in the Internet, with their own goals, behaviours, and even definitions (end-users and CAPs), cannot be ruled under the same consideration.

BEREC replied that: *"The Regulation does not make such a distinction between business customers and other customers under the definition of 'end-users'".* Nonetheless a reformulation on paragraph 5 of the Guidelines was admitted, for a clarification of this subject. As a result, Guidelines now explain how this connection is achieved: *"CAPs are protected as end-users under the Regulation in so far as CAPs use an IAS to reach other end-users. However, some CAPs may also operate their own networks and, as part of that, have interconnection agreements with ISPs; the provision of interconnection is a distinct service from the provision of IAS."* This is important and worth noting, because it sets the true two split realms wherein ISPs and the rest of users operate.

In other words: ISP control the networks and provide an IAS (internet access service). This cannot be done by CAPs and consumers on their own by any means<sup>61</sup>, since they both need, and can only act in the internet, as long as the access service is provided. That, is precisely the role of ISPs. Both consumers and CAPs share their position, as agents that entirely depend and rely on ISPs in the very same way for the IASs. For instance, their traffic is subject to suffering the same issues: slowdowns, blocks, prioritizing and so on by discriminations in the managing of the ISPs over the net. Neither CAPs or consumers have a power anything close to that over ISPs<sup>62</sup>.

To sum up, there are two positions: managing of the internet on one hand (ISPs); and the usage of the internet (CAPs and consumers), on the other. Hence, the latter are end-users, since both are subject to ISPs power in the same way.<sup>63</sup>

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<sup>61</sup> CAPs cannot provide Internet Access Services, but they can provide specialised services under the strict aforementioned terms. Art. 3.5: *"Providers of electronic communications to the public, including providers of internet access services, and providers of content, applications and services shall be free to offer 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. Providers of electronic communications to the public, including providers of internet access services, may offer or facilitate such services only if the network capacity is sufficient to provide them in addition to any internet access services provided. Such services shall not be usable or offered as a replacement for internet access services, and shall not be to the detriment of the availability or general quality of internet access services for end-users."* Hence, if a CAP is providing a specialised service, it is not an internet access service (IAS). Consequently, in these cases they do not operate as end-users either, being these operations in a different realm apart from the regular IAS prospects which we are referring to. In the end, the most common uses of the internet that most of population perform in their ordinary lives cannot be considered "specialised services".

<sup>62</sup> Technically, distributed denial-of-service attacks (DDoS) can cause a website to collapse, but it is a rare exception, needs a malware sophisticated enough to be launched at synchronised time, and it comes from hackers or crackers. This is as well one good example on how "technical measures" can be taken by ISPs to discriminate or block traffic without violating net neutrality. However, this raises one question: shall they have such guarding faculties, so they can prevent people to protest (for instance, against a political decision), in case that it is the goal of the DDoS? <https://www.pcworld.com/article/3158793/security/can-a-ddos-attack-on-whitehousegov-be-a-valid-protest.html>

<sup>63</sup> BEREC Guidelines... ob. cit. p. 5.

### 3. The review clause of the article 9. Deadline: 30<sup>th</sup> April 2019. Concerns on net neutrality regulation so far

Article 9 states:

*“By 30 April 2019, and every four years thereafter, the Commission shall review Articles 3, 4, 5 and 6 and shall submit a report to the European Parliament and to the Council thereon, accompanied, if necessary, by appropriate proposals with a view to amending this Regulation.”*

This is a chance for an assessment of the application of the Regulation along this time throughout Europe. Reports from the different NRAs were delivered to the BEREC, for the elaboration of compendium of the main concerns observed by the national agencies in the ISPs' compliance of the net neutrality principles, under the standards set in the 2016 Guidelines. In case of need for some updates or clarifications, two possible scenarios appear on the horizon. The most probable one, in which no modifications are made to the text of the regulation, but the Guidelines get updated to treat the issues arisen from 2016. The less probable, the detection of a potential breach on the text that would jeopardize the effectiveness of the Regulation. In this case, BEREC would be allowed to make a proposal directly to the Commission to amend the law, without any prior requirements. However, European Commission would not be tied to it, and since political consensus can be hard to obtain, at this point it is unlikely that any changes or amendments will be done to the original text.

Nevertheless, the reports of the first experiences of the NRAs, alongside the new strategic objectives for the period 2018-2020, approved in the 32<sup>nd</sup> BEREC plenary meetings that took place in Bucharest<sup>64</sup>, on October 2017, could influent any further modifications to the guidelines.

In this respect, BEREC has pointed out the new priorities for the period 2018-2020. According to the final version of the work program 2018<sup>65</sup>, these are as they follow:

1. *Strategic Priority 1: Responding to connectivity challenges and to new conditions for access to high-capacity networks*
2. *Strategic Priority 2: Monitoring potential bottlenecks in the distribution of digital services*
3. *Strategic Priority 3: Enabling 5G and promoting innovation in network technologies*
4. *Strategic Priority 4: Fostering a consistent approach of the net neutrality principles*
5. *Strategic Priority 5: Exploring new ways to boost consumer empowerment*

In this 5 goals list, net neutrality only lives up to the fourth place, falling behind the deployment of the 5G wireless telecommunications system, as stated in the official website<sup>66</sup>.

<sup>64</sup> [https://berec.europa.eu/eng/events/berec\\_events\\_2017/145-32nd-berec-plenary-meetings-in-bucharest-romania](https://berec.europa.eu/eng/events/berec_events_2017/145-32nd-berec-plenary-meetings-in-bucharest-romania) (26.08.2018).

<sup>65</sup> [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/download/1/7528-berec-work-programme-2018\\_1.pdf](https://berec.europa.eu/eng/document_register/subject_matter/berec/download/1/7528-berec-work-programme-2018_1.pdf) (26.08.2018).

Thus, Net Neutrality Regulation presents an apparent adequate level of implementation by now, allowing BEREC to place it in the back rows of relevance, while a subject like 5G, where timing, early adoption and quick deployment is crucial for the development of technology in the European Union<sup>67</sup>, steps ahead.

We can observe the referred quality of implementation of the net neutrality regulation by examining the general results of the NRAs reports. They were published in December 2017 by the BEREC in a document named: *“Report on the implementation of Regulation (EU) 2015/2120 and BEREC Net Neutrality Guidelines”*<sup>68</sup>. Individual reports are also available at the European Commission’s Digital Single Market website for detailed insight<sup>69</sup>.

The BEREC considers that, generally, most of NRAs are successfully applying both, the Regulation and the Guidelines. A careful reading shows that some sort of ongoing learning is being obtained following a case by case basis. NRAs are capable of implementing the Regulation and solving cases by themselves. Notwithstanding, the experience gained is being passed on through the BEREC Expert Working Group to other countries, thus creating a coherent and standardised response across all EU states. Coordination and exchange of “live” information in open cases is promoting a unified criterion for all Europe. As a consequence, it is likely that BEREC Guidelines are helping to avoid the formation of technical or legal artificial barriers and distinctions on the functioning of the internet inside the European Union.

BEREC’s assessment has come to a positive conclusion: *“BEREC concludes so far that the Net Neutrality Guidelines are well suited to assist NRAs in performing their tasks of supervision and enforcement as set out in Article 5 of the Regulation. As noted above, NRAs are in the process of gathering experience with the first cases, and still need to gather further experiences in order to be able to evaluate the Net Neutrality Guidelines. At the same time, no cases have appeared in which the Net Neutrality Guidelines themselves were insufficient”*<sup>70</sup>.

However, I would like to point out that only 5 out of 28 had implemented or were developing technical network monitoring tools for net neutrality, these being Austria, Bulgaria, Hungary,

<sup>66</sup> [https://berec.europa.eu/eng/news\\_and\\_publications/whats\\_new/4810-5g-international-roaming-and-net-neutrality-berec-holds-a-debriefing-on-important-documents-for-the-european-electronic-communications-market](https://berec.europa.eu/eng/news_and_publications/whats_new/4810-5g-international-roaming-and-net-neutrality-berec-holds-a-debriefing-on-important-documents-for-the-european-electronic-communications-market) (26.08.2018).

<sup>67</sup> WOLTER LEMSTRA, “Leadership with 5G in Europe: Two contrasting images of the future, with policy and regulatory implications”, *Telecommunications Policy* Vol. XLII, 2018, pp. 587–611. Page 608: *“Hence, for the leadership opportunity with 5G to become reality the industry may need some nudging. Given the envisioned European leadership role and the benefits accruing at the EU level, EU policy makers are in a key position to provide the necessary political and regulatory action. The benefits that 5G may bring to the EU at large warrant a discussion of the 5G leadership role within the European Commission, the European Parliament and the European Council, as well as within the regulatory fora such as the ERG and the IRG”*.

<sup>68</sup> [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/download/0/7529-berec-report-on-the-implementation-of-re\\_0.pdf](https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/7529-berec-report-on-the-implementation-of-re_0.pdf) (27.08.2018).

<sup>69</sup> <https://ec.europa.eu/digital-single-market/en/news/annual-country-reports-open-internet-national-regulators> (28.08.2018).

<sup>70</sup> Report on the implementation of Regulation (EU) 2015/2120 and BEREC Net Neutrality Guidelines, p. 4.

Latvia and Portugal<sup>71</sup>. Not even half of the States (11) had obtained technical data for a simple measure of the availability of high quality internet access services<sup>72</sup>.

I encounter difficult to find the other 23 NRA (at least) replies as trustful. There is a clear lack objective data, moreover considering the way the two questions concerning net neutrality were proposed: *“What approach have you taken to monitor the commercial and technical conditions related to the provision of Internet access services?”*; and *“If you started any monitoring of traffic management practices by ISPs what approach have you taken”*.

The report states that the majority of NRAs answered these two questions relying on indirect information, coming from: *“(...) an analysis of complaints and end-user reports (25 and 18 States respectively), made information requests to ISPs (23 and 24 respectively) and used a market survey (22, and no precise data provided for this question)”*. Lack of technical evidence can only lead to accepting these results as mere estimations, far from certainty. Therefore, more research is needed, and the results what will be published at the end of year 2018 will not be enough either, as measurement tools are yet under development.

Within the BEREC’s plans for net neutrality implementation in the coming years, there are 3 goals to accomplish. The first of them, is the development of a net neutrality measurement tool, a task that was already awarded in August 2018<sup>73</sup>. By this contract, the tool to be developed shall consist of three elements: an open source software, the creation of a reference system, and a portal set up at the BEREC website.

The second of the goals, is to keep on implementing the net neutrality Regulation. Annual reports from NRAs will be collected and analysed on the same yearly basis. However, there is one main concern to be discussed in the short and mid-term, the zero-rating<sup>74</sup>.

The third goal is related to the title of the present epigraph: assessing and submitting a report of the application of the net neutrality regulation by April 30<sup>th</sup> 2019, accompanied, if necessary, by appropriate proposals with a view to amending the 2015/2120 UE Regulation.

The BEREC has already announced that it: *“will provide an Opinion for the EC in which it will evaluate the experiences with the Regulation and the BEREC guidelines”*<sup>75</sup>.

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<sup>71</sup> ANACOM’s report is a 68 page document, issued in June 2018, and contains detailed insights on the major concerns regarding net neutrality implementation, such as Zero-rating practices and alike, traffic management, specialized services, quality of service, transparency, etc. ANACOM - Autoridade Nacional de Comunicações: *“Relatório relativo à neutralidade da rede. Aplicação dos artigos 3.º e 4.º do Regulamento (UE) 2015/2120 do Parlamento Europeu e do Conselho, de 25 de novembro de 2015 – maio de 2017 a abril de 2018–”*, 2018. Results for technical parameters can be found from page 48 to 59. Available online at: [https://www.anacom.pt/streaming/RelatorioNN\\_201705\\_201804.pdf?contentId=1456095&field=ATTACHED\\_FILE](https://www.anacom.pt/streaming/RelatorioNN_201705_201804.pdf?contentId=1456095&field=ATTACHED_FILE) (03.10.2018).

<sup>72</sup> Report on the implementation of Regulation (EU) 2015/2120 and BEREC Net Neutrality Guidelines, p. 33.

<sup>73</sup> [https://berec.europa.eu/eng/news\\_and\\_publications/whats\\_new/5045-net-neutrality-measurement-tool-result-of-the-tender](https://berec.europa.eu/eng/news_and_publications/whats_new/5045-net-neutrality-measurement-tool-result-of-the-tender) (28.08.2018).

<sup>74</sup> BEREC Work programme 2018, p. 18.

<sup>75</sup> Ibidem, p. 19.

## 4. Conclusions

Maybe one of the recommendations that can be done, in the light of the new measurement tool, would be the creation of a platform (like a website or an application) where end-users can communicate their results to the BEREC and their corresponding NRA, so any net neutrality infringements detected in their company's Internet Access Service can be addressed in a short period of time. A larger number of measurements would lead to more precise statistics and a deeper knowledge of ISPs' management and performance of their networks.

Also, a specific site in the portal of transparency<sup>76</sup>, dedicated to the processes ending in a fine for net neutrality violations, would help citizens in two accumulative ways. On one hand, it would help to detect infringing ISPs, so consumers would be better informed, and consequently empowering them by giving them the chance to hire with other companies that comply with the Regulation, therefore promoting the defence of the consumers in the telecom market. On the other, it would represent an unpleasant statement for the companies' reputation with the potential of affecting their public image, discouraging further infringements.

It is an open question, and yet remains to be seen, how BEREC sorts out the zero-rating plans issue<sup>77</sup>. So far, they have been permitted<sup>78</sup>, but a close look at its effects<sup>79</sup> and a re-

<sup>76</sup> Article 18 of the BEREC Regulation; Decision BoR (10) 26 by the Board of Regulators of BEREC concerning the transparency and access to documents at the BEREC; Decision BoR (11) 37 by the Board of Regulators of the Body of European Regulators for Electronic Communications on the Establishment of a Public Register of the BEREC Documents, amended by Decision BoR/2016/01; and BEREC Office transparency rules: Decision MC (10) 28 by the Management Committee of the BEREC Office concerning the transparency and access to documents at the BEREC Office; and Decision MC (11) 22 by the Management Committee of the BEREC Office on the Public Register of the BEREC Office Documents, amended by Decision MC/2016/05. [https://berec.europa.eu/eng/document\\_register/welcome/#transpolicy](https://berec.europa.eu/eng/document_register/welcome/#transpolicy) (28.08.2018).

<sup>77</sup> Zero-rating plans are offers made to customers, so the usage of some applications does not count against their data cap. So far, BEREC has permitted it as long as all services of the same kind benefit from it. For instance, it would not be allowed to have Netflix in a zero-rating plan and let HBO out, causing data consumption to go against the data cap when using it. Same criteria shall apply to any other VoD service. New VoD services that are created from now on, need to ask the ISP that provides the zero-rating plan to include them within.

<sup>78</sup> These are the conditions stated in the BEREC's Guidelines as of today (paragraphs 40 to 44):

"40. There is a specific commercial practice called zero-rating. This is where an ISP applies a price of zero to the data traffic associated with a particular application or category of applications (and the data does not count towards any data cap in place on the IAS). There are different types of zero-rating practices which could have different effects on end-users and the open internet, and hence on the end-user rights protected under the Regulation.

41. A zero-rating offer where all applications are blocked (or slowed down) once the data cap is reached except for the zero-rated application(s) would infringe Article 3(3) first (and third) subparagraph (see paragraph 55).

42. The ISP could either apply or offer zero-rating to an entire category of applications (e.g. all video or all music streaming applications) or only to certain applications thereof (e.g. its own services, one specific social media application, the most popular video or music applications). In the latter case, an end-user is not prevented from using other music applications. However, the zero price applied to the data traffic of the zero-rated music application (and the fact that the data traffic of the zero-rated music application does not count towards any data cap in place on the IAS) creates an economic incentive to use that music application instead of competing ones. The effects of such a practice applied to a specific application are more likely to "undermine the essence of the end-users' rights" or lead to circumstances where "end-users' choice is materially reduced in practice" (Recital 7) than when it is applied to an entire category of applications.

43. When assessing such agreements or commercial practices like zero-rating in relation to Article 3(2), the assessment should take into account the aim of the Regulation to "safeguard equal and non-discriminatory treatment of traffic" (Article 1) and to "guarantee the continued functioning of the internet ecosystem as an engine of innovation" (Recital 1) as well as Recital 7, which directs intervention against agreements or commercial practices which, "by reason of their scale, lead to situations where end-users' choice is materially reduced in practice", or which would result in "the undermining of the essence of the end-users' rights".

evaluation of its impact, could lead to some restrictions on how these plans are applied or offered to consumers. Is it going to be allowed as an exception from Net Neutrality rules? If so, it would be on behalf of the benefit for consumers, which is clear in the short-term<sup>80</sup>, but whose effects are unknown<sup>81</sup> in the long-term. This matter will probably be one of the most discussed -and worthy- topics by 30 April 2019, first deadline for the assessment of the EU 2015/2120 Regulation deployment.

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<sup>79</sup> CHRISTOPHER S. YOO, "Avoiding the Pitfalls of Net Uniformity: Zero Rating and non-discrimination", *Review of Industrial Organization*, Vol. L, No. 4, 2017, pp. 509-536.

<sup>80</sup> KRÄMER Jan; and PEITZB, Martin (2018): "A fresh look at zero-rating", *Telecommunications Policy* 42 (2018) 501-513.

<sup>81</sup> TORSTEN J. GERPOTT, "Zero-rating arrangements of mobile Internet access service providers - An analysis of main factors shaping the need for regulatory interventions", *Telecommunications Policy* Vol. XLII, 2018, pp. 489-500. P. 499: "(...) there is an enormous shortage of empirical studies exploring how customers change their Internet use behaviors and MNO [mobile network operations] selection patterns due to the introduction of ZRA [zero-rating arrangements]".

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