

Submission to the Constitutional Court of Colombia

24. November 2022

Dear Sir or Madam,

We are honored for the invitation of the esteemed Constitutional Court of Colombia to provide testimony as international expert on net neutrality. Our organization is based in Vienna, Austria and has been working on the issue of net neutrality for many years. Thomas Lohninger is the Executive Director of epicenter.works and Vice President of European Digital Rights, the umbrella of 45+ digital rights NGOs. This written response accompanies the oral testimony at the hearing on 18th November 2022.¹

This submission aims to demonstrate the negative effects of various forms of Zero-Rating on the telecom market and price of internet access. Subsequently, we look at the side of the applications that are benefiting from these programs to answer the question which impact Zero-Rating can have on the respect of pluralism of information and freedom of expression. Then we will examine the impact of Zero-Rating on the right to privacy and data protection and why allowing Zero-Rating of classes of applications is not a solution.

Our recommendation to the Court is to prohibit all forms of Zero-Rating that only apply to particular applications or classes thereof, as well as Zero-Rating for which the provider of the application has paid. Data volume which is currently reserved for these offers should be given to the users for the same price, but application-agnostic. Application-agnostic forms of Zero-Rating offer a solution to bridge the digital divide and should be encouraged.²

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1 The presentation and this submission are available here: <https://en.epicenter.works/document/4422>.

2 These forms of Zero-Rating are encouraged in the European Union. BoR (22) 81, paragraph 35. See <https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-the-implementation-of-the-open-internet-regulation-0>.

TYPES OF ZERO-RATING

Zero-Rating is the exemption of certain content or applications or classes of content and applications from the users data cap. A similar form of this practice is application-specific data volume whereby a limited cap enables the use of certain content, and applications are classes thereof.³ This needs to be distinguished from general data volume that enables the customer to use applications and content of their choice. Zero-Rating and application-specific data volume practices can be summarized as differential pricing practices, but for the purposes of this report we will follow the terminology by the Court and refer to both with the term Zero-Rating.

There are four types of Zero-Rating:

1. **Zero-Rating against payment (sponsored data)** – the provider of the zero-rated content or application offers monetary compensation to the telecom company. These can be payments, revenue sharing or marketing bundles. This model is only economically viable for incumbent content and application providers that can afford to pay such sums to secure their market position or have a brand that offers value to the telecom operator.
2. **Zero-Rating of individual applications** – One application is elevated to be zero-rated in the network of a telecom company. This is often the dominant application in a particular class (messaging, navigation, etc.) or the in-house application of the telecom company (TV, video streaming, etc.). That constitutes a scenario of picking a winner before the competition started, as it is usually very difficult for any other application in the same category to succeed in that network.
3. **Zero-Rating of classes of applications** – Efforts are made by a telecom company to zero-rate all applications in a class (messaging, social media, audio/video-streaming, etc.). If applications are invited to join an open non-discriminatory process to also become zero-rated, we speak of an open class-based Zero-Rating program. In theory, there is less impact on competition between the applications in the same class. Practically speaking, the number of Zero-Rating programs which can be joined by an application provider is very limited, the definition of the class is often arbitrary and the negative privacy impact is severe, as explained further below. Only incumbent telecom companies can sustain the administrative and technical effort of such offers.
4. **Zero-Rating that is application agnostic** – The Zero-Rating is not dependent on the content or application that is used. Examples are not counting traffic in off-peak hours like night time when the network is usually idle or exempting a low-bandwidth mode that still offers universal connectivity at a lower speed to the whole internet.

We assume that the provision that is being challenged in this case is also the basis of Article 9 in Resolution 3502 of the Commission for Communications Regulation (CRC). This Article establishes a basis of sub-internet offers, which only offer access to a subset of the internet and have to be distinguished from Zero-Rating. Zero-Rating is a form of economic discrimination, by making the data volume of certain applications more or less expensive than others. Sub-internet offers are a form of

3 A prominent example of application-specific data volume was the offer “Smart Net” by the Portuguese incumbent MEO which features prominently on the Wikipedia article on net neutrality and to which we issued a complaint to the Portuguese regulator ANACOM in 2018. The offer has since been prohibited. See https://en.wikipedia.org/wiki/Net_neutrality#/media/File:+_Smart_Net_-_advertisement_offering_service_packages.png and <https://en.epicenter.works/document/1111>.

technical discrimination, as they block or throttle the access to all other applications completely. Once the general data volume of an offer is consumed and the internet connection is blocked or throttled, the zero-rated applications have to be blocked or throttled as well – otherwise the offer has to be qualified as sub-internet. Sub-internet offers are prohibited under almost all net neutrality legislation around the world.

	Colombia	India	EU	Canada	USA	California & Washington
Sub-internet	✓	✗	✗	✗	✓	✗
Sponsored data	✓	✗	✗	✗	✓	✗
Individual applications	✓	✗	✗	✗	✓	✗
Classes of Applications	✓	✗	✗	✗	✓	~
Application-agnostic	✓	✓	✓	✓	✓	✓

Illustration 1: Comparison of the legality of certain offers. A bright line rule can legalise (✓) or prohibit (✗) an offer, or it is left to a case-by-case assessment (~).

The above chart includes the recent judgments of the European Court of Justice (ECJ)⁴ and the repeal of the 2015 FCC Open Internet Order by the administration of Donald Trump.

MARKET EFFECTS OF ZERO-RATING

Effects on the Telecom Market and Affordability of Internet Access

Zero-Rating can only be applied to internet access offers which have a data cap and do not provide for unlimited data volume. Furthermore, Zero-Rating offers are also more attractive when data volume is expensive and crucial aspects of the zero-rated service are incentivised, such as the time a streaming service can be used on a given budget. Subsequently, telecom operator need to confine the general data volume of their offers low enough for Zero-Rating offers to still provide an incentive to customers. Markets like Finland, where internet subscriptions are distinguished by speed and limitations on data volume are very rare, do not observe Zero-Rating. Two and a half years after the EU had adopted its Net Neutrality legislation⁵ we published a report analyzing the effect of the new framework. This report included an economic analysis of the impact of Zero-Rating on the price of mobile data volume. We found a statistically significant result ($p=0.04$) for markets in which Zero-

4 C-854/19, C-5/20 and C-34/20.

5 Regulation (EU) 2015/2120.

Rating was introduced between 2015 and 2016. These markets showed a 1 % price increase between 2016 and 2017, whereas markets without Zero-Rating in both cases showed a 10 % price decrease.

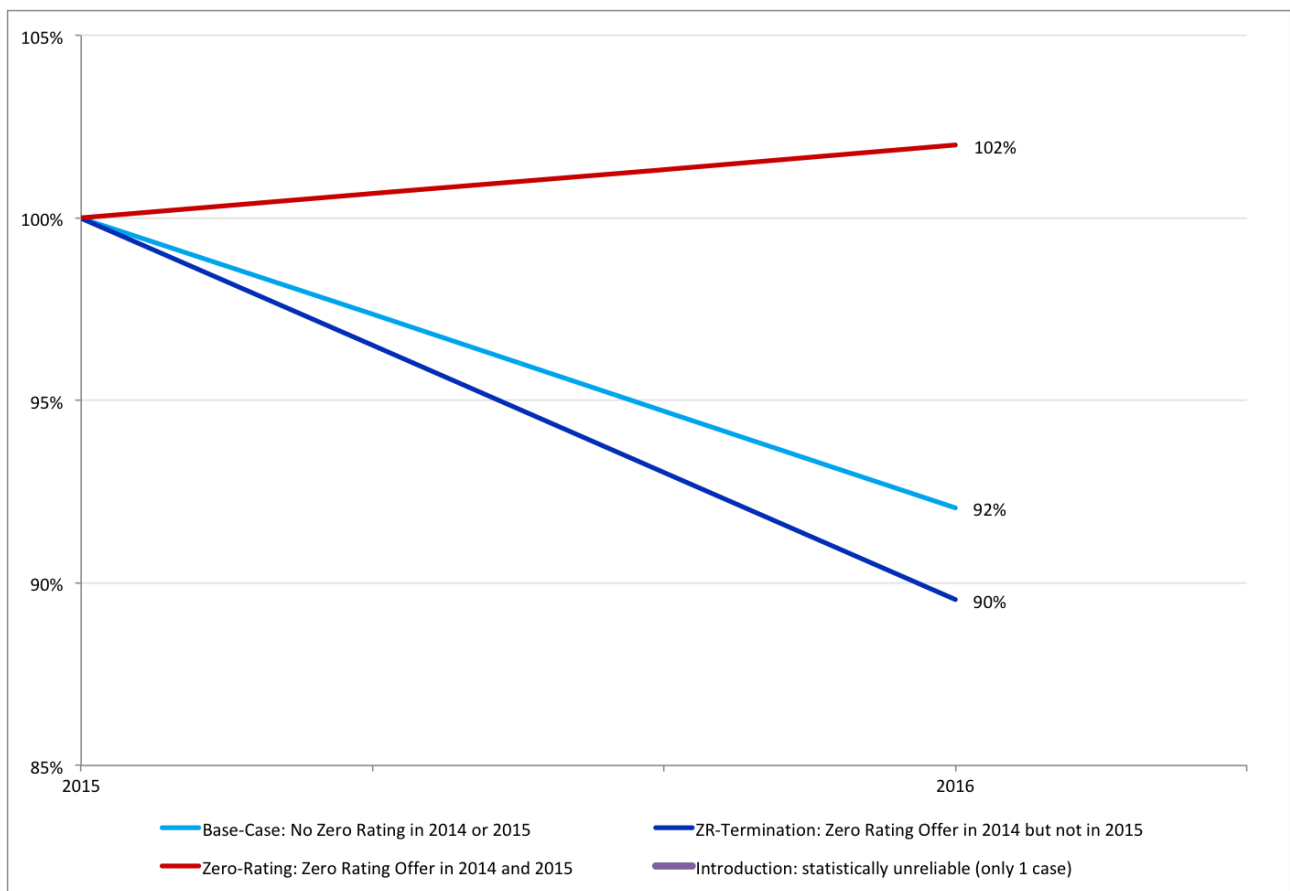


Illustration 2: Price developments in markets between 2015 and 2016 based on availability of Zero-Rating offers in 2014 and 2015

In conclusion, where we found statistically significant results, these confirmed the initial hypothesis: **the existence or introduction of Zero-Rating offers is associated with markets which exhibit price developments that are adverse to consumers.** However, since Zero-Rating offers became prevalent in almost all EU countries this analysis could not be extended back then.

In 2021 the European Court Justice ruled that the practice of Zero-Rating is in breach of the net neutrality legislation, because it violates the obligation for internet access providers to treat all traffic equally.⁶ The classification of Zero-Rating as a discriminatory practice was widely seen as a success by consumer protection and civil society groups.⁷ The court defined Zero-Rating as

“a commercial practice whereby an internet access provider applies a ‘zero tariff’, or a tariff that is more advantageous, to all or part of the data traffic associated with an application or category of specific applications, offered by partners of that access provider.”¹⁸

6 C-854/19, C-5/20 and C-34/20.

7 <https://techcrunch.com/2021/09/02/europes-top-court-slaps-down-zero-rating-again/?gucounter=1> and <https://edri.org/our-work/cjeu-in-surprise-judgment-zero-rating-is-illegal-under-eu-law/>.

8 ECJ C-34/20 Telekom Deutschland (throttling), paragraph 17; ECJ C-5/20 Vodafone (tethering), paragraph 14; ECJ 854/19 Vodafone (roaming), paragraph 15.

We believe the Guidelines by the Body of European Regulators of Electronic Communication (BEREC) which implemented this ECJ judgement to be very relevant to the case.⁹ Before the judgment, BEREC believed Zero-Rating is not a categorical limitation of consumers' right to use services and content and application providers have the right to offer services, if those are open for other applications in the same category to join.¹⁰ We will examine these "open class based Zero-Rating offers" further below. It was exactly this flawed reading by BEREC which the ECJ rejected and this failure from Europe should not be repeated in Colombia.

While a systematic analysis of the market effects from outlawing Zero-Rating in Europe is still lacking¹¹, we can point to evidence from individual countries which show that significant increases in data volumes for all customers as prices remained the same¹². A sudden jump in data volumes with stable prices has been observed as a consequence of Zero-Rating prohibitions before in Austria, Slovenia and the Netherlands¹³.

Let's turn to other world regions. The Canadian telecommunications authority CRTC first ruled against an individual Zero-Rating offer in 2015¹⁴ and issued a bright line rule banning all Zero-Rating offers in 2017¹⁵. As of 2022, Canada experiences a continuous drop in price for mobile data volume, according to a recent report from CRTC.¹⁶

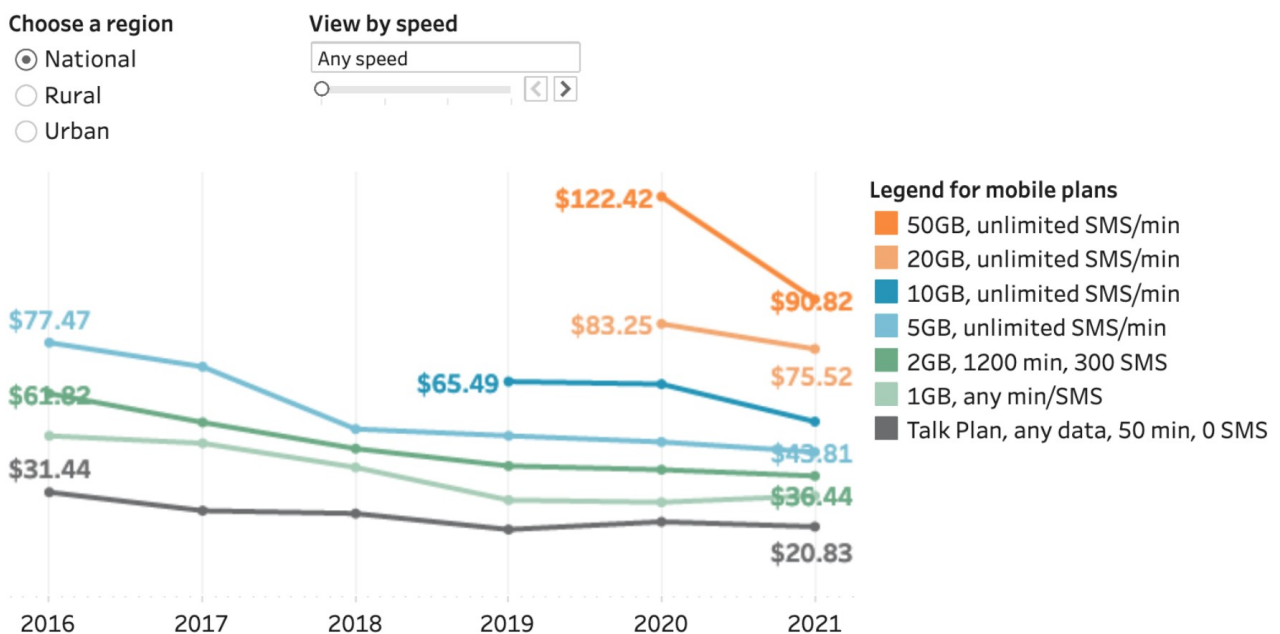


Illustration 3: Lowest average reported price of mobile plans in Canada

9 BoR (22) 81. See <https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-the-implementation-of-the-open-internet-regulation-0>.

10 BoR (16) 127. See <https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-the-implementation-by-national-regulators-of-european-net-neutrality-rules>.

11 BoR (22) 128, pages 4-5. See <https://www.berec.europa.eu/en/document-categories/berec/reports/berec-report-on-the-implementation-of-the-open-internet-regulation-2022>.

12 <https://www.teltarif.de/telekom-magentamobil-mehr-daten volumen/news/87391.html>.

13 <https://en.epicenter.works/content/net-neutrality-violations-ceased-after-akvorrat-intervention-data-volumes-increased-up-to-17> and <https://webfoundation.org/2015/02/guest-blog-the-real-threat-to-the-open-internet-is-zero-rated-content/>.

14 CRTC 2015-31. See <https://crtc.gc.ca/eng/archive/2015/2015-31.htm> and for context: <https://script-ed.org/article/comparative-case-studies-in-implementing-net-neutrality-a-critical-analysis-of-zero-rating/>.

15 <https://crtc.gc.ca/eng/archive/2017/2017-104.htm>.

16 <https://crtc.gc.ca/eng/publications/reports/PolicyMonitoring/mob.htm>.

This observation is not limited to countries of the Global North. India is a world leader on net neutrality and one of the few global south countries with a prohibition of Zero-Rating since 2016.¹⁷ The country also has the fifth lowest average price for one GB of data in the world.¹⁸

In our 2019 report we assume these findings can be explained in part by the fact that Zero-Rating distorts the normal competition between telecom companies based on data volumes and speeds. Instead the number of applications participating in Zero-Rating become a factor by which consumers differentiate between internet offers¹⁹. Incumbent operators like Deutsche Telekom in Germany or Vodafone in the UK can attract more applications than smaller operators. Thereby, they create a “unique selling proposition” to attract consumers and no longer need to compete on the dimension of data volumes, where Mobile Virtual Network Operators (MVNOs) and smaller operators can match their offers, in effect leading to a slow down of data volume growth or drop in prices. New telecom companies entering the market can contribute significantly to lowering prices, as has been observed in India²⁰, but they could be prevented from doing so by wide-spread Zero-Rating offers.

We expect that in markets like Portugal, where all internet providers used to engage in Zero-Rating, the growth rate of data volume will have slowed down even more than in markets where Mobile Network Operators (MNOs) do not engage in Zero-Rating. An Analysis by Rewheel indicates that this assumption could be correct.²¹

17 Telecom Regulatory Authority of India (TRAI), Prohibition of Discriminatory Tariffs for Data Services, 2016. See https://www.trai.gov.in/sites/default/files/Regulation_Data_Service.pdf.

18 <https://www.cable.co.uk/mobiles/worldwide-data-pricing/>.

19 Vodafone Pass (UK) and T-mobile (DE) advertise their products with the number of applications participating in them. See <https://www.vodafone.co.uk/mobile/pay-monthly/vodafone-passes> and <https://www.netzwelt.de/mobilfunktarif/166813-streamon-neuen-streaming-partner-gibt-dezember-2018.html>.

20 <https://medium.com/swlh/the-economics-behind-indias-super-cheap-0-26-per-gb-mobile-data-40f28bdd7774>.

21 We could also verify this result in our 2018 submission to Portuguese regulator ANACOM. See <https://epicenter.works/document/1111>.

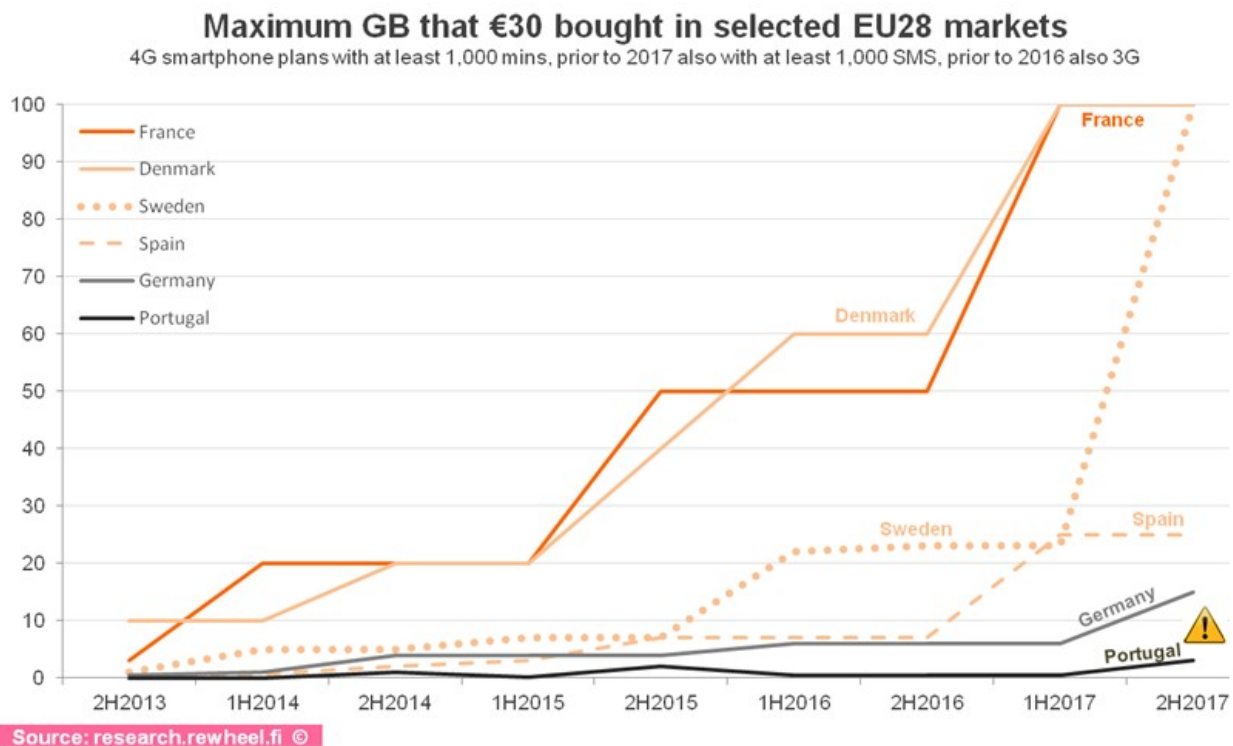


Illustration 4: Analysis by Rewheel of the development of mobile network prices

To conclude, Zero-Rating seems to have an adverse effect on the affordability of internet access services. To establish a Zero-Rating offer requires the telecom company to invest in new processes, enter into marketing agreements with the application providers and setup the technical equipment to monitor the traffic of users in order to count it differently according to the applications used. Hence, for these efforts to be justified, Zero-Rating is a factor to keep data volumes artificially low and prices high, whereas prohibiting Zero-Rating has shown a positive effect on the affordability of data volume.

In 2017, the Canadian telecom regulatory authority CRTC has analyzed the impact of Zero-Rating on access and affordability of the internet in detail and came to the same conclusion:

"The differential pricing practices that have thus far been offered in Canada (mobile TV and Unlimited Music) were offered only to consumers who subscribed to the upper tiers of service at higher prices, so it cannot be said that these practices promoted, facilitated, or encouraged adoption of Internet access services or improved affordability in any meaningful way. Further, the evidence on the record does not suggest that any future differential pricing practices in Canada will be implemented in a manner that improves the adoption of Internet access services or their affordability. The Commission is not persuaded that differential pricing practices would improve access to the Internet or affordability in the Canadian market."²²

Effects on the market of Content and Applications

Zero-Rating practices also have a severe effect on the market between Content and Application Providers (CAPs) and thereby on the choice of internet users how to use their internet connection and the capacity of the open internet to innovate. Zero-rated applications have a competitive advantage by

22 CRTC 2017-104, paragraph 70.

being privileged on the accesses level with their data volume not counting towards data caps. In practical terms, the duration a user can use a video streaming or video conferencing service will vary greatly on this element. Furthermore, social networking and messaging applications like WhatsApp can amplify this effect by becoming the default messaging app for many people and benefiting from the network effect. In conjunction this leads to insurmountable market entry barriers for privacy-friendly competitors of WhatsApp, like e.g. Signal.

To quantify this effect, we conducted a complete survey of all Zero-Rating offers by all mobile network operators and mobile virtual network operators in all 31 European countries that the Net Neutrality law applied to.²³ This data set includes the zero-rated application and the county in which it is headquartered.²⁴ We found that four of the top 10 zero-rated applications are from the same company: Meta (formerly Facebook). 15 of the top 20 come from the United States of America. Only three of the top 20 are from Europe.

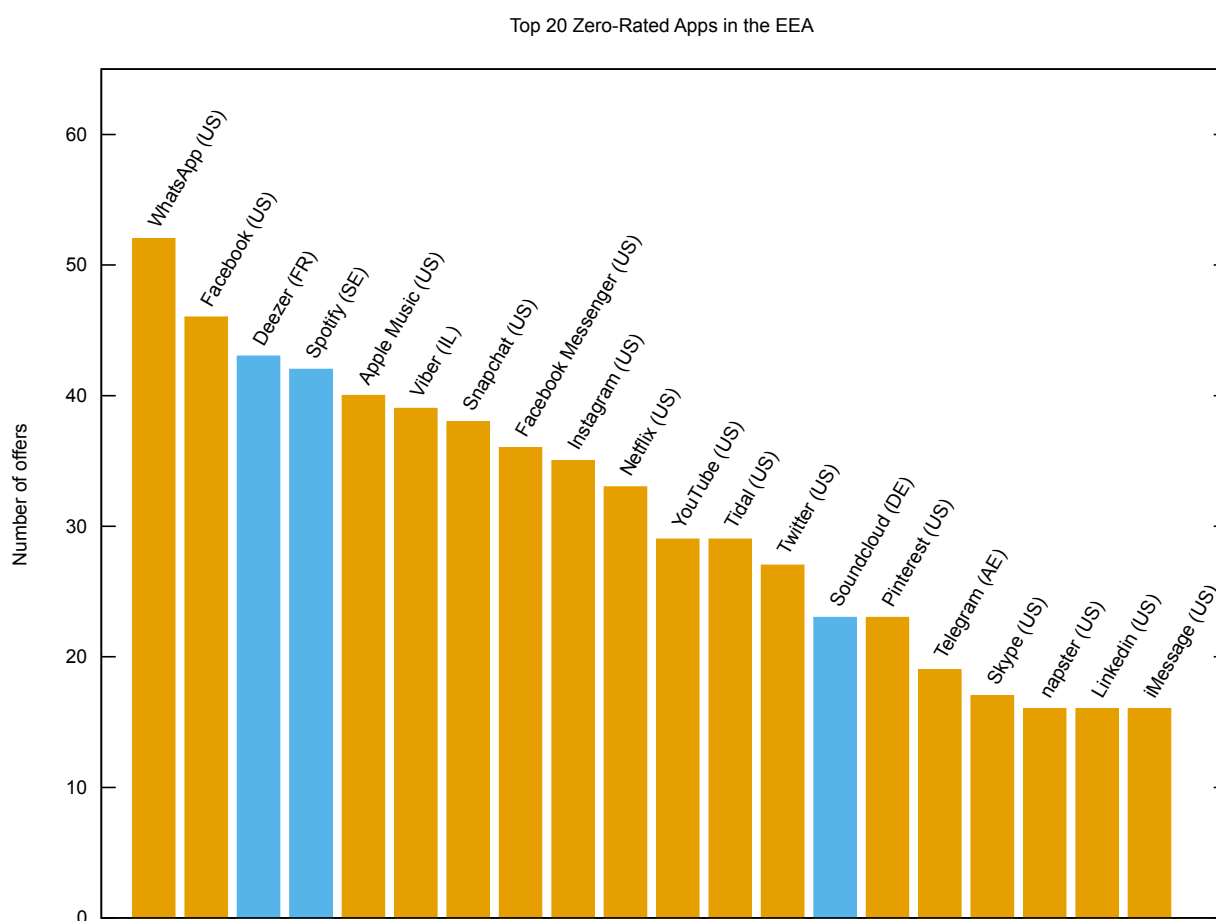


Illustration 5: Top 20 zero-rated apps in differential pricing offers in the EEA. Offers from the EEA are highlighted in blue.

23 The EU Net Neutrality law applied to the EU28 plus the European Economic Area (Norway, Iceland and Liechtenstein).

24 <https://en.epicenter.works/document/1521>.

The same effect can be observed in Colombia. According to study commissioned by CRC, the most commonly zero-rated apps in Colombia are WhatsApp and Facebook.²⁵





Aplicaciones incluidas en la oferta	Claró	eTb	Movistar	tigo	WOM	Total Pospago
	-	1	-	1	1	3
	-	-	-	3	2	5
	4	1	-	-	-	5
	-	1	-	-	-	1
	-	-	1	-	-	1
	-	5	1	-	-	6
	-	-	1	-	-	1
Total general	4	8	3	4	3	22

Tabla 4. Tipos de planes con zero rating o navegación adicional para aplicaciones en modalidad pospago











Aplicaciones incluidas en la oferta según empaquetado	Buenofón	Claró	eTb	Exito	Movistar	tigo	Virgin	WOM	Total Prepago
Sólo navegación	-	4	-	-	3	1	6	-	14
	-	-	-	-	-	-	2	-	2
	-	1	-	-	3	-	-	-	4
	-	-	-	-	-	1	2	-	3
	-	3	-	-	-	-	-	-	3
	-	-	-	-	-	-	2	-	2
Sólo voz	-	-	-	-	-	-	2	-	2
	-	-	-	-	-	-	2	-	2
Voz, SMS, Datos	6	8	5	6	13	7	12	3	60
	6	-	-	6	-	7	10	3	32
	-	-	-	-	-	-	2	-	2
	-	8	-	-	1	-	-	-	9*
	-	-	5	-	12	-	-	-	17
Total general	6	12	5	6	16	8	18	3	76

Tabla 5. Tipos de planes con zero rating o navegación adicional para aplicaciones en modalidad prepago

Fuente: Páginas web de los operadores, elaboración CRC..

Illustration 6: Table from the CRC study showing a strong dominance of Meta Inc. (Facebook, WhatsApp and Instagram) in the Zero-Rating programs in Colombia.

The majority of Zero-Rating offers is made up by just a few applications. As we will describe below, the bureaucratic effort necessary in order to become a partner in these programs is often

25 Comisión de Regulación de Comunicaciones, Report on Net Neutrality in Colombia as of 2021, 2022, pages 59-61. See https://www.crcm.gov.co/system/files/Biblioteca%20Virtual/Estado%20de%20la%20Neutralidad%20de%20Red%20en%20Colombia%202021/Estudio_Neutralidad_CRC_2021.pdf.

underestimated. This effort also needs to be multiplied with the number of Zero-Rating offers an application wants to be part of. We could identify 186 Zero-Rating offers in the 31 countries of the European Economic Area which we analyzed in 2019²⁶, while according to the aforementioned study from CRC, Colombia alone currently has 174 Zero-Rating offers²⁷. This is also not a simple sign-on, as it requires ongoing cooperation between the application provider and the telecom company to keep the service identifiable in the network so that its data volume can be distinguished from every other traffic. That's why the majority of applications enter into a maximum of three Zero-Rating offers.

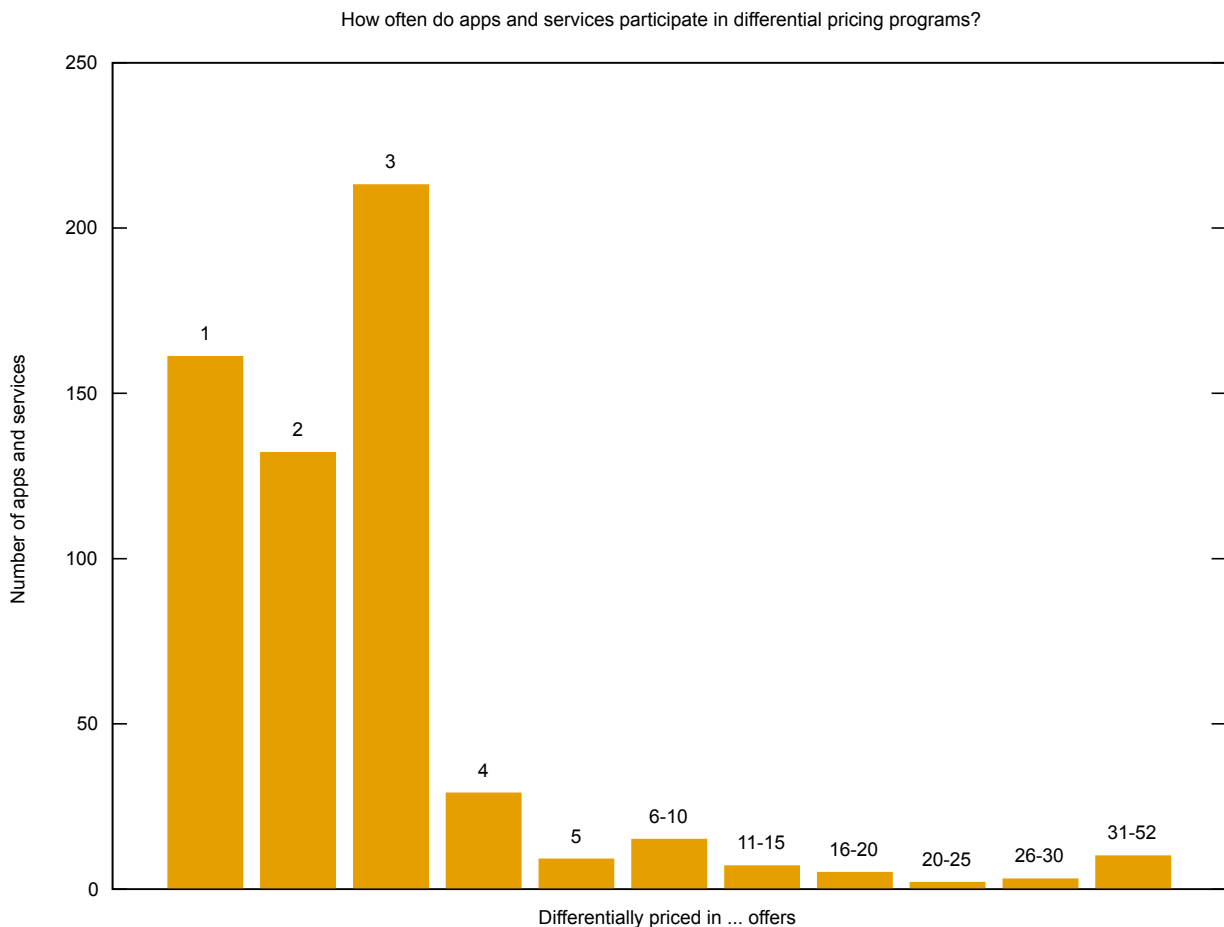


Illustration 7: Number of differential pricing cooperations CAPs have entered into

It is important to understand that in order to become a zero-rated application the provider of the service has to take several burdensome steps. First, they have to identify that there is a Zero-Rating program that they might want to become a part of, because existing or future users are connected to the internet with a telecom provider that offers it. Second, they have to read and understand the commercial and technical conditions of cooperation, which vary greatly between programs. Third, they have to apply to these programs if there is a public option to join them. We have attempted to contact

26 <https://en.epicenter.works/document/1522>, pages 19-21.

27 Comisión de Regulación de Comunicaciones, Report on Net Neutrality in Colombia as of 2021, 2022, pages 58-59. See https://www.crcm.gov.co/system/files/Biblioteca%20Virtual/Estado%20de%20la%20Neutralidad%20de%20Red%20en%20Colombia%202021/Estudio_Neutralidad_CRC_2021.pdf.

the programs that offered contact information posing as interested applications, but in half of the cases we didn't get a response. Sometimes the contact information is also country-specific, which hurts the cross-border provision of online services.

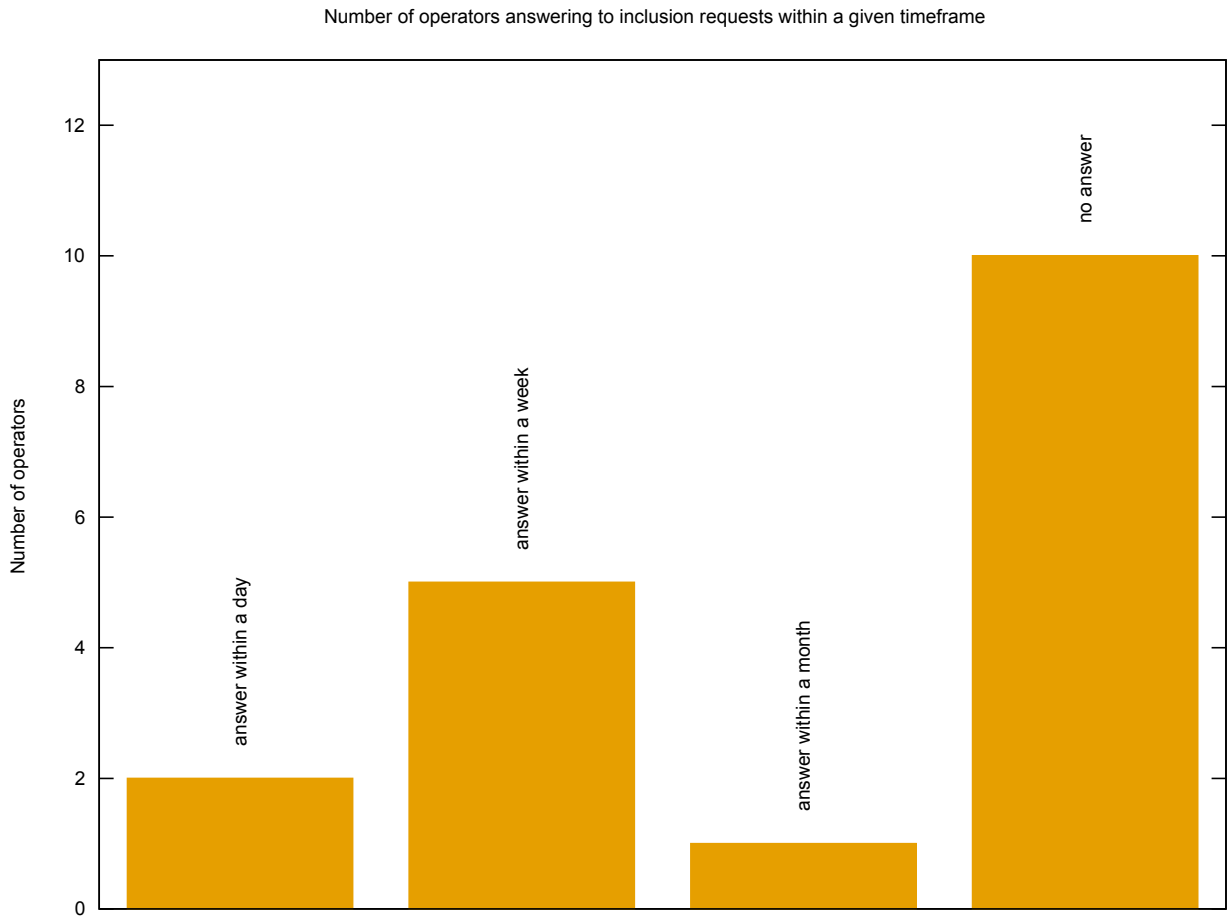


Illustration 8: Duration of the response time of IAS providers on CAP request to participate in DPP

The screenshot shows a sign-up form with three required fields, each marked with an asterisk (*):

- Kapcsolattartó neve ***: A single-line text input field.
- Telefonszám ***: A phone number input field. It is pre-filled with '+36 30' and has a dropdown arrow on the right side.
- E-mail-cím ***: A single-line text input field.

Illustration 9: Screenshot of the sign-up form for CAPs to a Hungarian open class-based Zero-Rating offer which requires a Hungarian phone number

Fourth, the provider of the application has to enter into commercial and technical agreements. Those often include non-disclosure-agreements, obligations to provide the telecom company access to all beta versions of the app one month in advance and penalties in case of non-compliance. Fifth, in order to keep the application identifiable in the network of the telecom company, so that the data volume associated with it can be distinguished when calculating the users data cap, the provider of the application has to constantly cooperate with every change they might make to their service.²⁸ We will look closer at the privacy implications of this step in the chapter below. Importantly, the contracts of many Zero-Rating programs also contain the risk for the application provider of paying for any wrongfully billed data volume in the network of the telecom company, which poses a severe risk for small to medium sized internet companies. This is why, even medium sized companies like Vimeo, one of the main competitors of YouTube, stated in an open letter to the German regulator that even with their 200 staff they are unable to enter into Zero-Rating agreements with all of the telecom companies their customers use to access their service.²⁹

This is a vital component of these offerings for the provision of the Colombian net neutrality law under consideration. Even ignoring the fact that the demand of consumers after certain content or applications cannot be assessed accurately and without negative impacts on the privacy of all internet users, the applications that are demanded by the users might simply be unable or unwilling to even enter into Zero-Rating agreements with all the telecom companies of their users. It would be short-sided for the law to assume that this is as simple as a telecom operator curtailing offers around particular applications on a phone, when in reality it requires a high degree of ongoing cooperation that no company besides a few global tech giants has managed to sustain.

IMPACT ON DATA PROTECTION AND PRIVACY

Telecom companies have to identify the traffic from applications and services that participate in Zero-Rating programs in the billing equipment of their network in order to count data volumes associated with the use of these applications differently. This sometimes means also differentiating between

²⁸ <https://en.epicenter.works/document/1522>, pages 19-30.

²⁹ https://www.tagesspiegel.de/downloads/19872192/2/vimeo_stellungnahme_stream-on.pdf.

different functionalities of applications, if for example a messaging app is zero-rated only with its text messages, but any voice-call or video-call functionalities still count towards the data cap of the user. Often the advertisement content in applications is not part of the Zero-Rating and needs to be counted differently. Therefore, a telecom operator offering such a product needs a very fine-granular knowledge of the data flows of their users.

Hence, many Zero-Rating offers rely on the use of a technology known as Deep Packet Inspection (DPI).³⁰ With such DPI equipment in the network of the telecom operator the concrete contents of the communication have to be evaluated, like the domain names a user accesses, the specific web pages they visit, the certificates which identify encrypted communication to a particular web offer. This information allows the telecom operator to gain concrete insights in behavior and preference of their users.

The European net neutrality legislation explicitly states that telecom operators “shall not monitor the specific content” of their users’ communication.³¹ The BEREC Guidelines on the Implementation of the Open Internet Regulation provide further clarification how this provision has to be interpreted.

“69. In assessing traffic management measures, NRAs should ensure that such measures do not monitor the specific content (i.e. transport layer protocol payload).

70. Conversely, traffic management measures that monitor aspects other than the specific content, i.e. the generic content, should be deemed to be allowed. Monitoring techniques used by ISPs which rely on the information contained in the IP packet header, and transport layer protocol header (e.g. TCP) may be deemed to be generic content, as opposed to the specific content provided by end-users themselves (such as text, pictures and video).”³²

According to the OSI-Model³³ of the internet architecture, telecom companies are prohibited from examining everything above layer 4. The operations of the telecom company shall be limited to the first four layers, which deal with the transport of data packages, but they have to refrain from evaluating layers that relate to data interpretation, any concrete content like image types, video-conferencing and actual user interactions like particular pages on a news site.

30 https://en.wikipedia.org/wiki/Deep_packet_inspection.

31 Regulation (EU) 2015/2120, article 3, paragraph 3, subparagraph 1.

32 BoR (22) 81. See <https://www.berec.europa.eu/en/document-categories/berec/regulatory-best-practices/guidelines/berec-guidelines-on-the-implementation-of-the-open-internet-regulation-0>.

33 https://en.wikipedia.org/wiki/OSI_model.

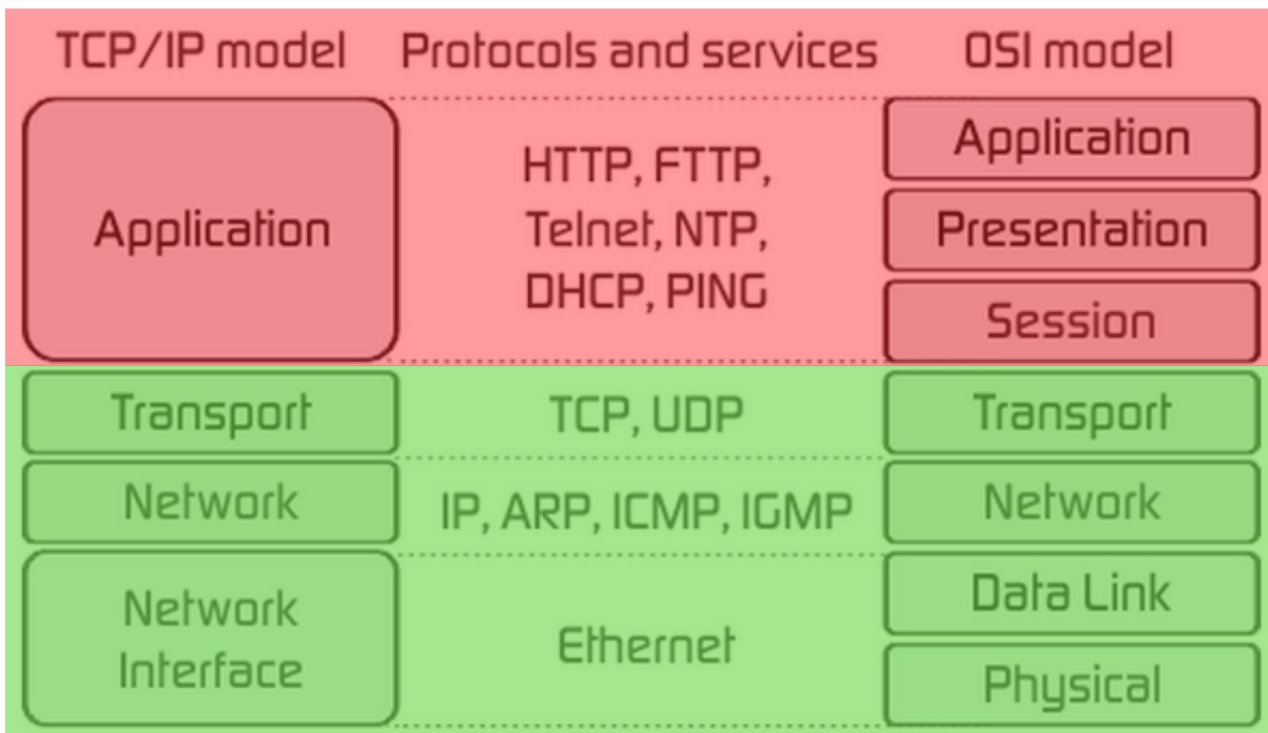


Illustration 10: Telecom operators are only allowed to inspect generic content (green), but not specific content (red) of the internet architecture, under EU law

We can distinguish four different methods of identifying internet traffic associated with a particular content or application: IP-addresses, domain names or Uniform-Resource-Locators (URLs), Server-Name-Identification (SNI) and DNS snooping. IP-addresses are the most privacy friendly form, but they are rarely the option that is available. Dedicated IP-addresses for a particular application or type of content are rarely used these days, because there is a shortage of IP-addresses³⁴ and, due to stability reasons, hosting often happens on cloud services. Only bigger providers of application are able to offer stability and dedicated IP-addresses only for the content they want to be zero-rated. More commonly used are domain names or URLs to identify particular services. We all know URLs from the addresses bar in our web browsers, e.g. <https://www.corteconstitucional.gov.co>. But URLs can also reveal particular sub-pages that can give an indication of the browsing behavior and preferences of a particular individual, e.g. <https://www.corteconstitucional.gov.co/relatoria/1996/C-172-96.htm>. SNI consists of a domain name of an accessed resource that is transmitted when initiating an encrypted connection.

A third identification method, less commonly utilized but featured in the Vodafone “Pass” offers, is “DNS snooping”. According to technical documentation of Vodafone, this method allows providers of applications to offer domain names as identification criteria. Vodafone then looks for DNS traffic matching this domain name and presumably bills traffic to associated IP addresses differently. It is unclear whether Vodafone only monitors the DNS requests to its own DNS servers or inspects the entire DNS traffic in its network. In both cases this inspection of specific user requests can reveal sensitive information.

³⁴ https://en.wikipedia.org/wiki/IPv4_address_exhaustion.

Distinguishing traffic based on URLs, SNI and DNS criteria requires the inspection of every connection initiated by customers of a Zero-Rating offer over the monitored network. In particular where URLs are used, this processing involves not just abstract metadata, but also sensitive user information on web requests from every user.

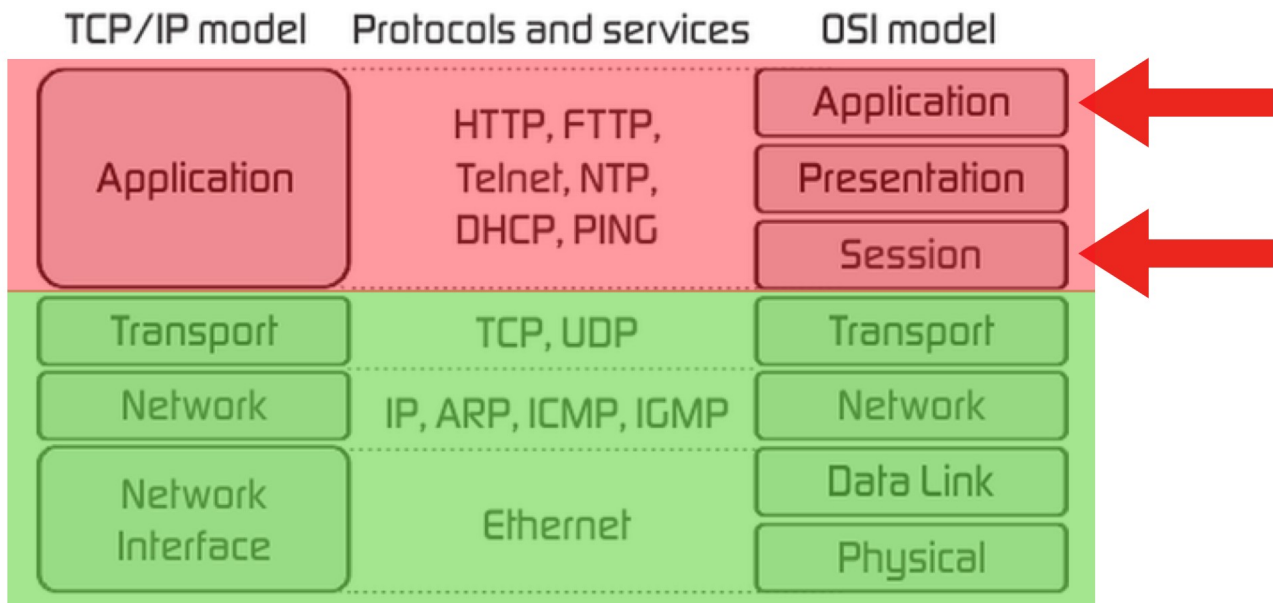


Illustration 11: Specific (red) and generic (green) content according to the BEREC Guidelines. The arrows point to the layers inspected when using SNI, URLs, or DNS as identification criteria

The privacy problems associated with Zero-Rating offers increases if the telecom operator tries to include more and smaller applications into the program. These providers of applications will be more reliant on shared hosting and cloud service infrastructure, which means that more intrusive identification methods might be required.

The provision in Article 56, currently under evaluation of the Court, exempts offers from non-discrimination obligations when they are based on the “needs of market segments or their users according to their usage or consumption profiles”. The telecom operator has to invade the privacy of their customers by monitoring their traffic, profile their behavior and create consumption patterns, if they want to base their Zero-Rating offers on real user demand. Such practices violate the right to privacy and data protection.

In practice, it is very questionable if Zero-Rating offers in Colombia are really based on the demand of internet users. The fact that services from American Big Tech companies are the main beneficiaries of such programs, as highlighted above, suggests that the inclusion in such programs is based on sheer market dominance. Adding to this is the fact that only a handful of global application providers is capable of sustaining the cooperation required to be included in so many Zero-Rating programs and/or payments from the application provider to the telecom company for exempting their applications from data caps. In turn, this would be a problem from an antitrust perspective.

IMPACT ON THE RIGHT TO FREEDOM OF INFORMATION AND RESPECT FOR PLURALISM OF INFORMATION

As described above, the main beneficiaries of Zero-Rating programs are just a few dominant social media applications. Most of them have an advertisement-driven business model which monetizes the attention of its users and subsequently optimizes their algorithms to increase the time users spend on the platform.³⁵ We know from internal Facebook documents leaked by whistleblower Frances Haugen that the risks the platform creates to mental health of teenagers, incitement of racial violence and the spread of dangerous misinformation is knowingly accepted by Meta Inc.³⁶ Zero-Rating programs have been portrait in the proceedings of the Court as a charitable avenue for low-income parts of society to provide access to at least some information services.

But in light of the negative side-effects of these services a limitation of the information habits of vulnerable parts of society might not be beneficial to them at all. Should for example false or misleading information about the COVID-19 pandemic or the Russian invasion of Ukraine be received by a person on any of these zero-rated services, they are not even able to click on the link in the WhatsApp message or the Tweet and assess the accuracy of the information provided. They are technically barred from leaving the platform and looking up information on independent news sources. Surely, the government could provide trustworthy content on those zero-rated applications, but that would only further strengthen their market dominance and the dependency of Colombian citizens to these services.

From the perspective of media pluralism we can also identify a negative effect of limiting access to just a few applications. Local media is very often not included in these offers. Particular audiovisual content requires a certain bandwidth to be consumed and aggregates quickly over time to consume monthly data caps. The zero-rated audiovisual services will always be in a much more privileged position as they can be accessed indefinitely from anywhere with mobile coverage. Public broadcasters as well as private media companies are often not in a fair competition with rivaling content and applications that are part of the Zero-Rating offers. This distorts not just competition in the media space, it also guardrails on the users' choice between information sources.

REMARKS AFTER THE HEARING

We can observe an almost exponential growth of the internet over the past decades, while at the same time the cost for network equipment and energy consumption have remained quite stable. Assuming regular network investments around upgrading outdated equipment, this means that every year the capacity in the network increases while the cost of the telecom operator do not account for that capacity increase.³⁷ These benefits are usually handed down to consumers in the form of higher data caps and thereby lower MB prices. The variable cost of data volumes in mobile networks are mostly around capacity constraints at peak times which require investment to increase capacity. But

35 See Zuboff, S. & Schwandt, K. (2019). The age of surveillance capitalism: the fight for a human future at the new frontier of power. Profile Books.

36 <https://www.wsj.com/articles/the-facebook-files-11631713039>.

37 <https://www.analysismason.com/contentassets/b891ca583e084468baa0b829ced38799/main-report---infra-investment-2022.pdf>.

when existing network capacities meet current demand, the variable cost induced by data traffic are negligible. The main cost factor that remains is the subscriber management, billing and marketing.³⁸ These costs are also all fully applicable Zero-Rating offers.

As we have shown above, the creation of Zero-Rating offers includes administrative costs around the management of the on-boarding, marketing and continued identification of zero-rated applications. Providing access to just a few applications would hence be more costly than providing access to the whole internet.

The internet is a network of interconnected networks and not a two sided market. Telecom companies should not be in the position to choose the content or applications that a user has access to or to which the user can afford access to. Net neutrality aims to protect this global accessibility and the benefits for information freedom that come with it through non-discrimination provisions. The provision currently under consideration by the Court limits this non-discrimination protection based on “needs of market segments or their users according to their usage and consumption profiles”. But needs of the market are inherently different from the needs of individuals. Some examples are access to health services for people with disabilities, qualitative news sources for language minority groups or simply the use of new and innovative services that have not received enough attention to even be considered for Zero-Rating by telecom companies. People can also not vote with their feet and switch between access products to meet their needs. No matter how many applications are zero-rated, they will never fully reflect the diversity of the whole internet. Unmetered access via Zero-Rating is always cheaper for the consumer than general data volume to access the full internet. Similarly, transparency is an insufficient safeguard against discriminatory practices for a population that is not full of telecom market experts.

Limiting the access of the most vulnerable parts of society to just a few applications instead of the whole internet is a violation of human rights.³⁹ Hence, the question for the Court to answer concerns the proportionality of this infringement. This has to be assessed in light of the commercial realities of providing such curtailed services and what the alternatives after a prohibition of Zero-Rating would be. It is in the interest of every telecom company to sell their internet access products to as many subscribers as possible. The application-agnostic differentiation of access products offers a wide variety of possibilities to provide affordable services to all groups within society that respect fundamental rights. Application-agnostic forms of Zero-Rating are also particularly suited to meet the capacity limitations of existing mobile networks by being limited in speed or off-peak hours.

RECOMMENDATIONS

We recommend the Court to strike the provision of Article 56 in question and prohibit all forms of application-specific Zero-Rating and sub-internet offers. The recommendation is to oblige that any data volume currently dedicated to Zero-Rating offers by telecom companies are offered to the customers of these offers at the same price, but application-agnostic. Application-agnostic means irrespective of the content, service or application that is transmitted, so general data volume that can be used for the whole internet.

38 BoR (22) 137. See <https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-preliminary-assessment-of-the-underlying-assumptions-of-payments-from-large-caps-to-isps>.

39 <https://digitallibrary.un.org/record/845728>.

Other forms of application-agnostic Zero-Rating should be encouraged. These include the exemption of traffic from data caps in off-peak hours, for example night times. There could also be a low bandwidth mode that is not deducted from any data cap which allows customers to use essential services, like navigation or messaging. International examples show that 1.7 Mbit/s are commonly used in such programs and would even allow for a low-definition use of video services.⁴⁰ Such practices would not put additional stress on the mobile networks in Colombia, as the aggregated bandwidth consumption of such offers would be comparably low and the subscriber management is a cost factor that would not change compared to the current scenario of Zero-Rating.

40 <https://cyberlaw.stanford.edu/sites/default/files/blogs/van%20Schewick%202022%20White%20Paper%20Impact%20of%20ECI%20Decisions%2020220414.pdf>.