

Using techno-regulatory instruments to protect human rights: A case study of the regulation of network neutrality in Brazil.

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Abstract:

This article examines the use of techno-regulatory mechanisms to protect and promote human rights in the Internet. The paper uses a case study approach and a socio-legal theoretical framework to investigate how the use of techno-regulatory instruments can enhance the protection of certain human rights on digital environments. It examines the regulation of network neutrality, a very controversial and complex regulatory topic, in Brazil, one of the first countries to establish through legal instruments the protection of Internet data packets against any sort of discrimination. Under the techno-regulatory mechanisms proposed in the Marco Civil da Internet and the Federal Decree 8.771/16 Brazil enacted a legal framework that despite some criticism protected network neutrality and enhanced its role in the promotion of digital human rights like freedom of expression and privacy. The article examines network neutrality conceptualization, its key characteristics and how this techno regulatory mechanism can be used to protect digital human rights. The paper then analyses the regulation of network neutrality in Brazil and concludes that despite some vulnerabilities the guarantee of net neutrality promotes the development of a legal environment prone to promote and protect digital human rights in Brazil.

Keywords: Network neutrality, Brazil, Human Rights, Protection

Introduction

The protection of digital human rights is one of the central topics informing the Internet governance agenda². Reflecting over this particular issue Carr³ notes that like other “large-scale systems like the environment or global finance, Internet governance is not a single, unitary function or practice. Rather, it is a complex matrix

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² Kurbalija J., 2016. An Introduction to Internet Governance. (7th edn), Malta: DiploFoundation.

³ Carr, M., 2015. Power Plays in Global Internet Governance. Millennium: Journal of International Studies. 43(2), p. 645.

of technical standard setting, resource allocation and legal arrangements”, coordinating the use and development of the Internet. The range of the debates held under the scope of Internet governance reflects not only the social and economic perspectives of its development, but is also influenced by the technological principles underlying its growth. The interweaving of technological and socio-economic normative principles gave rise to a set of techno-regulatory elements that ground the network of technical and social governance^{4 5}. As pointed by DeNardis⁶ (2014, 8):

Internet governance decisions involve both scientific reasoning and social considerations of power and authority. For example, the design of the Internet address space (the collection of all available Internet addresses) and the domain name space specified a technical requirement for each name and number to be globally unique. Whereas this requirement for global uniqueness has necessitated forms of centralized coordination, control of names and numbers has been a fundamental global struggle of Internet governance since 1990’s.

The network technical development was an important element impacting the network governance design. It created a group of architectural principles that would guide not only the technical development and operation of the network, but also its governance Investigating elements influencing the network development Ziewitz & Brown⁷ listed a group of technical principles that also shaped the development of governance practices and structures: the techno governance elements of openness, interoperability, redundancy an end-to-end. The first two impact more directly Internet governance and its regulatory development. Meanwhile, openness, for example, as noted by Ziewitz & Brown⁸ “has come to denote the absence of centralized points of control - a feature that is assumed to make it easy for new users to join and new

⁴ Braman, S., 2010. The Interpenetration of Technical and Legal Decision-making for the Internet. *Information, Communication & Society*. 13(3), pp. 309-324.

⁵ DeNardis, L., & Musiani, F., 2016. Governance by Infrastructure. In: Musiani, F., & Cogburn, D.L., & DeNardis, L., & Levinson, N.S. (eds). *The Turn to Infrastructure in Internet Governance*. Information Technology and Global Governance. 2016. New York: Palgrave Macmillan.

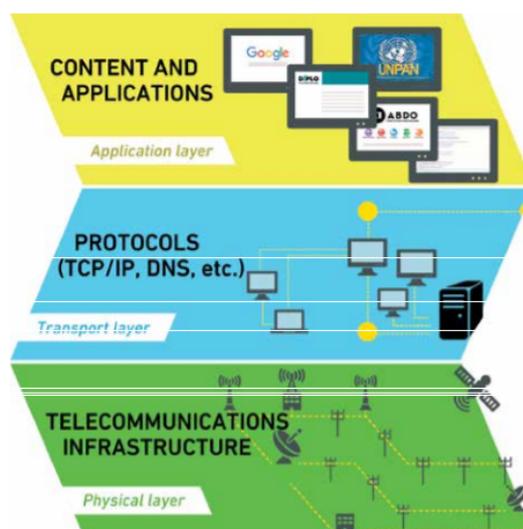
⁶ DeNardis, L., 2014. *The Global War for Internet Governance*. New Haven, CT: Yale University Press.

⁷ Ziewitz, M. & Brown, I., 2013. A Prehistory of Internet Governance. In *Research Handbook on Governance of the Internet*. Brown, I. (ed), 2013. Edward Elgar Available at SSRN: <https://ssrn.com/abstract=1844720>

⁸ Ziewitz, M. & Brown, I., 2013. A Prehistory of Internet Governance. In *Research Handbook on Governance of the Internet*. Brown, I. (ed), 2013. Edward Elgar, p. 15.

uses to unfold”. It is deeply connected to the rise of the open culture associated with Internet policy-making and the open Internet policies, coalitions, initiatives or structures being rooted in early technical movements like open software and open standards. It became an element that represented a technical and governance approach committed to concepts of distributed authority and democratic participation that are so close to the way that the Internet governance ecosystems were structured and are operated.

The Internet’s multi-layered structure implicates the existence of three interconnected layers (the physical layer - telecommunication infrastructure; the transport layer – standards and protocols; and the application layer - content). Figure 1 illustrates a set of distributed governance and regulatory regimes that need to be highly coordinated to avoid disruptions or harm to its normal development and use. The decision, for example, to implement a new transport protocol can contribute to reducing the costs of infrastructure use but also to the violation of digital rights such as those regarding privacy.



(Fig. 01)

One clear example of this techno-legal normative interpenetration process and also of the power relations involved in Internet governance policy making can be observed in the discussions about the regulation of network neutrality. Envisaged as a technical element grounded in Internet design, its socio-economic implications are so extensive that they assume a techno-regulatory rationality. It is able to shape not only the ways in which the Internet evolves but also its economic and social nature. One of the central topics of the current Internet governance agenda is network

neutrality. In a general definition, network neutrality is the guarantee that data packages transiting through the Internet will be treated in an isonomic way not being discriminated or degraded. Legislation in the United States restricts the “ability of broadband ISPs, insofar as they provide “Internet access service,” to treat IP packets differently on the basis of their content or to charge content providers for transmitting those packets to the ISPs”⁹. In a more legally developed approach, it is defined in the Brazilian governance framework as the obligation that “the party responsible for the transmission, switching or routing has the duty to process, on an equal basis, any data packages, regardless of content, origin and destination, service, terminal or application”¹⁰.

The emergence of topics like network neutrality and its techno-social-normative nature highlights not only the peculiarities surrounding the practical aspects of Internet governance and regulation, but also reinvents and exposes past and recent developments of Internet governance scholarship. As noted by Kleinwächter¹¹ “20 years ago, Internet governance was a technical issue with some political implications. Today, Internet governance is a key political issue with some technical components”, which calls for closer collaboration among code-makers and law-makers, both nationally and globally”. Moreover, the implications of regulating aspects of Internet technical elements, particularly the ones related to how the information is transmitted, routed or commuted has increasingly impacted the exercise of digital rights of its users, particularly, the ones related to freedom of expression and privacy.

One important element highlighting the implications of this regulatory approach can be noticed not only by observing the effort of the Internet Engineering Task Force – IETF to publish guidelines establishing “Privacy Considerations for Internet Protocols – RFC 6973 or to create a research group like the Human Rights Protocol Considerations Research Group (HRPC) that is chartered to investigate whether standards and protocols can enable, strengthen or threaten human rights and already proposed guidelines promoting the protection of rights like freedom of

⁹ Nuechterlein, J. E., & Weiser, P. J., 2013. *Digital Crossroads: Telecommunications Law and Policy in the Internet Age*. Cambridge: The MIT Press, 198.

¹⁰ Article 9 of the Lei nº. 12.965/2014, the Marco Civil da Internet.

¹¹ Kleinwächter, W., 2018. Towards a holistic approach for Internet related public policy making: Can the Helsinki process of the 1970s be a source of inspiration to enhance stability in cyberspace? The Global Commission on the Stability of Cyberspace (GCSC). GCSC thought piece January 2018. The Hague: Centre for Strategic Studies.

expression and freedom of assembly. It can also be perceived in the development of legal frameworks regulating key aspects of Internet functional elements like the network neutrality.

I – Network neutrality contextualisation

The techno-regulatory concept of network neutrality has its origins in the technical set of principles underpinning the early architectural functionality of the Internet that promoted the free circulation of data . Observing the influence of these architectural elements, particularly the principles of openness and end-to-end in the development of better policies to promote innovation and competition in telecommunications, Tim Wu¹² coined the expression “network neutrality.” The concept “describes the normative goal that all data should move across the Internet without being subject to discrimination based on origin or type”¹³. Despite its controversial conceptual perspective¹⁴, the idea gained traction with different stakeholders particularly in academia and civil society. It became deeply associated with the promotion and protection of economic development, innovation and competition and a core element supporting freedom of expression, speech and access to information¹⁵.

Network neutrality, given its techno-regulatory nature, is an important example of the increasing intersection between the technical and the political¹⁶. This technical decision to not treat data packages on the Internet differently has important economic and social effects. Telecommunications companies and Internet service providers (ISPs), position themselves against, or in favour of, network neutrality according to the policy issue under discussion. When the topic concerns innovation and competition, they are completely against network neutrality. Using an economic approach, telecommunications companies and ISPs agree that the inability to charge consumers according to the type of data that they are using creates a levelling of the field that is unfair, as those consuming less data bandwidth share the costs with

¹² Wu, T., 2003. Network Neutrality, Broadband Discrimination. *Journal of Telecommunications and High Technology Law*, (2) [Online] Available at: <https://ssrn.com/abstract=388863> or <http://dx.doi.org/10.2139/ssrn.388863>

¹³ Hoskins, G. T., 2018. Draft Once; Deploy Everywhere? Contextualizing Digital Law and Brazil's Marco Civil da Internet. *Television & New Media*, 19(5), pp. 431–447. <https://doi.org/10.1177/1527476417738568>

¹⁴ Zhu, K., 2007. Bringing Neutrality to Network Neutrality. *Berkeley Tech. Law Journal*. 22. pp. 615.

¹⁵ Nunziato, D., 2009. *Virtual Freedom: Net Neutrality and Free Speech in the Internet Age*. Stanford: Stanford University Press.

¹⁶ Latour, B., 1994. On Technical Mediation. *Common Knowledge* 3 (2): 29-64.

those consuming more. However, when they want to promote “intermediaries’ non-liability” they use network neutrality as a key supporting element as they cannot inspect data packages, so they cannot know the content and consequently cannot be held liable.

In practice, network neutrality means that an Internet service provider (ISP) like SKY broadband must not filter or deteriorate the data packages transmitted by and for its customers nor could it charge its customers a different rate because they are using streaming services like Netflix or Amazon TV. It is important to note that the rationality supporting the network neutrality and the need to protect the data packages flow in the network from unjustified and unfair filtering or deterioration is an important element promoting not only privacy, but also innovation¹⁷ (Zittrain, 2008).

Assuming that the network will not discriminate data traffic and that all data packages will be transported under the same conditions not suffering any technical deterioration or economic discrimination being for example delayed or overcharged, developers and innovators can develop experimental applications and services without being technically or financially limited. This is a key element supporting the high level of innovation and usability of the Internet and its associated applications¹⁸¹⁹²⁰. The equal treatment of data packages in the Internet promoted by the respect to the network neutrality supported the development of applications offering innovative services of voice over IP (Skype), instant messaging (WhatsApp) and video streaming (Netflix, Amazon TV and YouTube TV). The network neutrality also shapes directly the economic use of the network as ISPs could not charge more for customers using online services and accessing content that demands more data routing, switching and processing by the ISP. It also reinforces in a technical-normative way the protection of privacy, as if the ISP can filter or deteriorate data package traffic, it will have to inspect the data package and at least will have access to metadata that could provide access to users’ sensitive information like location and destination of the data package, which could, for instance, expose certain customers

¹⁷ Zittrain, J. L., 2008. *The Future of the Internet -- And How to Stop It*. Yale University London: Penguin.

¹⁸ Lessig, L., 2001. *The future of ideas: the fate of the commons in a connected world*. New York: Random House.

¹⁹ Van Schewick, B., 2007. Towards an Economic Framework for Network Neutrality Regulation. *Journal on Telecommunications and High Technology Law*, 5. pp 329.

²⁰ Frischmann, B. M., van Schewick, B., 2007. Network Neutrality and the Economics of an Information Superhighway: A Reply to Professor Yoo. *Jurimetrics*. 47. pp. 383 – 427.

that at a particular moment were streaming the likes of pornographic or sensitive content.

This complex environment led to network neutrality policies becoming one of the most intense battlefields in Internet governance both nationally and internationally. For more than a decade, network neutrality “has been at the centre of contentious Internet policy debates in North America and Europe”²¹, and until today, despite being gradually recognised and being protected in the European Union (Regulation EU 2015/2120) and countries like Brazil, India and Canada (Global Net Neutrality Coalition, 2018), it recently returned to the centre of the international Internet governance agenda. In 2015, the U.S. government decided to enact regulations protecting and championing network neutrality. Under “President Obama’s Plan for a Free and Open Internet”²² the Federal Communication Commission (FCC) voted on the Open Internet Order and reclassified ISPs as common carriers under Title II of the U.S. Telecommunications Act. One consequence of this decision was that ISPs were unable to legally implement technical and economic measures to manage a user’s Internet traffic. However, this position has changed drastically under Donald Trump’s administration. In December 2017, the FCC repealed the Open Internet Order, damaging the regulatory elements promoting the protection of network neutrality in the U.S., thereby causing alarm for contrasting regulatory models. While it is still too early to understand the operational consequences of the FCC’s decision as it is still pending implementation and is under judicial scrutiny in several law suits, it is important to note that the policy change sparked not only international criticism, but also some unexpected regulatory developments regarding the protection of network neutrality in the U.S.. On 6th March 2018, for example, Washington Governor Jay Inslee signed the first state net neutrality bill (New York Times, 2018) and spearheaded a movement of more than 27 states which followed the same strategy.

II – The regulation of network neutrality in Brazil

²¹ Ly, A., & MacDonald, B.H. & Toze, S., 2012. Understanding the net neutrality debate: Listening to stakeholders. First Monday, [Online]. Available at:

²² [The Obama White House] (2014, November 10). President Obama's Statement on Keeping the Internet Open and Free [Video File]. Retrieved from <https://www.youtube.com/watch?v=uKcjQPVwfDk>

The network neutrality debate in Brazil followed a similar path the same path, with some interesting nuances. Despite being one of the most controversial topics debated during the Marco Civil da Internet drafting process²³, which led the Brazilian media to highlight the topic as a key factor delaying the process in parliament²⁴, network neutrality had not attracted much interest or debate in Brazilian academia until the final moments of the bill's approval. During his investigation of network neutrality regulation in Brazil,²⁵ Ramos noted that until 2014 there had been no information about the topic "network neutrality" in the CAPES thesis repository.

However, this lack of research interest did not prevent the development of regulatory instruments dealing with instrumental aspects of network neutrality in the country. The network neutrality regulatory process can be traced back to 1995 and the enactment of the Norma 004 by the Ministry of Communications. As mentioned in the second chapter, this landmark regulatory instrument classified the Internet as a value-added service and not a telecommunications service. This measure promoted Internet development in Brazil in various ways, but its main impact was the creation of an open market for Internet services and ISPs in particular. At that time, the regulatory framework conditioned telecommunications services to be developed exclusively under a state monopoly regime that could only be commercialised by private actors under an extremely complex and bureaucratic regime. In contrast, value-added services were free to be explored commercially by private actors independently of state authorisation which led to the creation of a variety of small- and medium-sized local and regional ISPs in the country.

Another crucial element of this inaugural regulatory instrument was inserted in provision 5.4. It established that "institutions exploring telecommunications services when providing access to the public telecommunications network for provision of Internet connection services must not practice any discrimination against Internet service provider's activities"²⁶. This rudimentary protective provision is understood as the first regulatory mechanism to establish protection against data discrimination in

²³ Solagna, Fabricio., 2015. A Formulação da Agenda e o ativismo em torno do Marco Civil da Internet. MPhil thesis. Instituto de Filosofia e Ciências Humanas da Universidade Federal do Rio Grande do Sul.

²⁴ Cruz, Francisco Carvalho de Brito., 2015. Direito, Democracia e Cultura Digital: A experiência da elaboração legislativa do Marco Civil da Internet. MPhil thesis, Faculdade de Direito da Universidade de São Paulo.

²⁵ Ramos, Pedro Henrique Soares., 2015. Arquitetura da Rede e Regulação: A neutralidade da rede no Brasil. MPhil. Escola de Direito de São Paulo, p. 16.

²⁶ Ministry of Communications, Norma 004, 1995

the country²⁷. It also set the foundational elements indirectly grounding the development of a broader and technically more adequate protective regime.

The regulatory process advanced further in 1997. The new telecommunications regulatory framework, the Federal Law 9.472/1997, established in its Article 3, III, a protective provision determining that telecommunications users must not face discrimination when accessing and using telecommunications services, including added-value services. While the provision was mainly directed at traditional telecommunications services like telephony, the overall understanding was that the protection against discrimination in data traffic applied to the entire telecommunications ecosystem. It was only in 2005 that a more structured and formal position protecting network neutrality was developed. Under pressure to establish a regulatory position about Internet applications offering voice-over IP services (VOIPS), ANATEL enacted an administrative regulation determining that ISPs could not prohibit or discriminate against data traffic generated by VOIPS. This decision re-focused the protection against discrimination from the traffic generated by ISPs to the traffic created by end-users and shaped the development of a more user-centred policy framework.

The regulation of network neutrality shifted again in 2007. At that time, the discrimination of data packages on the Internet had become a prominent topic in the Brazilian telecommunications regulatory context. Concerned about possible negative effects of the deployment of news services and applications based on high-speed broadband and the convergence of companies simultaneously providing telecommunications and Internet connection services, ANATEL began to enact instruments regulating data discrimination. The Resolution 477/07 of 2007 and the Resolution 614/13 of 2013 were established to regulate the Serviço Móvel Pessoal (SMP) (Personal Communication Services – PCS) and the Serviço de Comunicação Multimídia (SMC) (Multimedia Communication Service). The new ruling established in both regimes the prohibition of discriminating financially and technically against the data flow generated by Internet end-users discriminate financially and technically the data flow resulting generated by Internet end-users.

²⁷ Ramos, Pedro Henrique Soares., 2015. *Arquitetura da Rede e Regulação: A neutralidade da rede no Brasil*. MPhil. Escola de Direito de São Paulo.

In an attempt to create a more structured regulatory approach, ANATEL launched in 2011 a public consultation to receive contributions about the regulation of network neutrality. Consultation n. 45 aimed to collect inputs about a new regulatory instrument to SMC services that would directly shape economically and technically the flux of data packages on the Internet and affect the protection or not of network neutrality. The document proposed important provisions regulating network neutrality and caused strong debate, causing particularly strong opposition from the telecommunications industry. Under pressure, ANATEL decided to change the regulatory proposition, indicating that the issue would be better regulated in the Marco Civil da Internet context. It is important to note that the Brazilian parliament at that time was taken by surprise over the high stakes surrounding the Marco Civil da Internet bill and particularly the conflicts arising around network neutrality, a topic it had completely ignored in the past^{28 29}.

Having previously been ignored by the Brazilian parliament, network neutrality has become an important governance topic. Since 2009, it has gradually received more attention from the governance system, as evidenced when CGI.br enacted the Resolução RES/2009/003/P establishing the “principles for the governance and use of the internet” in Brazil. This soft law instrument setting principles to guide Internet governance and use, established that “filtering or traffic privileges must meet ethical and technical criteria only, excluding any political, commercial, religious and cultural factors or any other form of discrimination or preferential treatment” (CGI.br, RES/2009/003/P,). Following the influence of CGI.br governance principles, network neutrality protection was elevated to one of the three pillars of the Marco Civil da Internet process and was included in the proposal from an early stage.

The Projeto Lei 2126/2011 protected network neutrality in two different provisions. It proposed a layered framework embracing elements to guide the general interpretation of Internet regulation and more objective provisions framing the network neutrality concept and its application. Initially the bill proposed in section IV of Article 3 the preservation of network neutrality as a general principle guiding the use and governance of Internet in Brazil. The classification of network neutrality as a principle evidences two interesting aspects of the bill. Firstly, it indicated the relevance of the actors involved in the Marco Civil da Internet drafting process.

²⁸ In Ramos.

²⁹ In Hoskins.

Network neutrality was driven to the same level of importance of social and legal values as freedom of expression and privacy as the key principles proposed to guide Internet use in Brazil. Secondly, strategically noted as a principle, network neutrality would later assume an important role in shaping not only the concrete application of the law in courts, but also future policy and regulatory developments that should follow the protective principle proposed. The second protective layer proposed was placed in Article 9. Located in the section regulating ISP, the provision established that “the party responsible for the transmission, switching or routing has the duty to process, on an isonomic basis, any data packages, regardless of content, origin and destination, service, terminal or application”³⁰. Under this non-discriminatory approach the regulatory model proposed in the bill authorised degradation or discrimination of data traffic only in cases where the measure was technically necessary to maintain the levels of quality of the service provided.

After a polarised political process with the involvement of key actors³¹, particularly during the debate about network neutrality, the Marco Civil da Internet was approved, enacting the two-layered frame presented earlier. The Marco Civil da Internet established network neutrality among the guarantees of freedom of speech, communication and expression; protection of privacy and personal data; the preservation of stability, security and functionality of the network; the liability of agents according to their activities; the preservation of the participative nature of the network; and the freedom of business models promoted on the internet, as principles disciplining the use and governance of the Internet in Brazil (Federal law Brazil 12.965/2014, Article 3).

The law also made provision to technically establish (despite the need of further regulation) an intermediary level of protection to network neutrality. Notwithstanding the criticism of some actors that advocated the establishment of a more enforceable set of provisions³², the political consensus built at the time led to an intermediary solution. In its Article 9 the law established the techno-normative boundaries of network neutrality in the country mainly by fixing the prohibition of “discriminating” data packages traffic and listing the possible exceptions to this

³⁰ Brasil, Projeto de Lei 2126/2011

³¹ In Paap.

³² Marques, C. & Perin Filho, L. A. & Rielli, M. & Tresca, L., 2015. Análise “Marco Civil da Internet: seis meses depois, em que pé que estamos?”. Artigo 19. [Online] Available at: <http://artigo19.org/blog/2015/01/23/analise-marco-civil-da-internet-seis-meses-depois-emque-pe-que-estamos/>

regime. The elements grounding the implementation and operation of this regime, however, were left to be established in a complementary decree:

Art. 9 - The party responsible for the transmission, switching or routing has the duty to process, on an isonomic basis, any data packages, regardless of content, origin and destination, service, terminal or application.

§ 1 - The discrimination or degradation of traffic shall be regulated in accordance with the private attributions granted to the President by means of Item IV of art. 84 of the Federal Constitution, aimed at the full application of this Law, upon consultation with the Internet Steering Committee and the National Telecommunications Agency, and can only result from:

I - technical requirements essential to the adequate provision of services and applications; and

II - prioritization of emergency services.

The Marco Civil da Internet clearly stated that it needed further regulation in two elements of its core protective framework: network neutrality and privacy. Trying to avoid the collapse of the Marco Civil da Internet the Brazilian Ministry of Justice, using an enhanced version of the drafting process used to create the Marco Civil da Internet started in January of 2015 a public process to develop in an open, transparent and collaborative way a decree regulating the law. Coordinated by the Secretary of Legislative Affairs (SAL) of the Ministry of Justice the process was divided in two phases. During the first, taking place between January and April of 2015, interested actors could visit the campaign's website and provide suggestions and comments in four specific areas: network neutrality, connections records, privacy and a general topic for others non-categorised considerations.

After all contributions were systematised the final version was reviewed and consolidated in Decree 8.771/2016. The regulatory decree reinforced the protective provisions of the Marco Civil da Internet and characterised the discrimination or degradation of Internet traffic as exceptional measures only to be enforced in cases listed in the Decree (Articles, 1, 2 and 3 of Decree 8.771/2016). The protection of network neutrality can only be waived in the following cases: a) to guarantee to the adequate provision of Internet-based services; b) the management of security

incidents; and c) the provision of emergency services (Articles 4 and 5 the Decree 8.771/2016).

The development of different layers of protection to the network neutrality in Brazil, despite the unclear set of rules allowing the flexibilization of the net neutrality in the country contributed significantly to the enhancement of digital rights like privacy and freedom of expression, particularly by creating mechanisms to protect the data flow as will be discussed in the next session.

Final Considerations

The enactment of provisions recognising the protection to network neutrality in Brazil was a significant contribution to the promotion of digital human rights in the country. While there is still concerns about the lack of control of the situations legally allowing the flexibilization of net neutrality, particularly when it is connected to the possibility to degrade data package's traffic in order to avoid network congestion and the disruption of services and applications one key provision set on the Marco Civil da Internet.

Although, the existing framework still not perfect, the duty to process, on an isonomic basis, any data packages, regardless of content, origin and destination, service, terminal or application, attributed to the ones transmitting, switching or routing data over the Internet when combined with the prohibition to block, monitor, filter or analyse the content of data packets fixed on section 3 of article 9 of the Marco Civil da Internet create a significant protective layer to digital rights in distinctive ways. For instance it does not authorise actors involved in the Internet data flow operation to analyse the content of data packages what at the same time contributes to protect freedom of expression, freedom of access to information and the user's privacy as ISPs cannot determine what type of media or contented the user is accessing or transmitting.

This is an important feature supporting not only the importance of protecting network neutrality, but also the need to better understand and use techno-regulatory instruments to enhance digital rights protection.

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