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Does net neutrality work? The Dutch case

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Does net neutrality work? The Dutch case

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Cambridge, UK



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Introduction

The Netherlands is among the few countries that have put specific net neutrality standards in place. It was the first country to do so in the European Union. Contrary to the original European Union approach, which lacks a material implementation of net neutrality principles, Dutch parliament decided to take a firmer position and introduced quite a detailed regimen on net neutrality. Providers of public electronic communications networks, via which Internet access services are delivered, and providers of Internet access services shall not hinder or slow down applications or services on the Internet. Another very important net neutrality principle was based on incidents of blocked applications, such as Skype, and on the announcement by mobile operators that they would start charging for applications. The Dutch net neutrality article also forbids providers of Internet access services to charge for Internet access services dependent on the services and applications which are offered or used via these services. This non-discrimination rule includes 'zero rating'. The best-known example of zero rating is bundling Internet access services with over-the-top services without charging for data traffic.

The new European rules on net neutrality, now part of a special regulation, borrow heavily from the Dutch example but also put an end to the strict zero-rating rules. According to many, zero rating is allowed under the new rules. However, the Dutch claim the regulation still allows a strict non-discrimination policy.

The Dutch implementation of the European net neutrality rules is examined in the paper in a critical way, with a focus on its strengths and weaknesses. Both have become visible in the cases that were or are being investigated by the regulator. As these cases are some of the first where regulators were forced to take action in the net neutrality context, the paper will offer unique added value and will contribute to a more realistic approach when the new European rules will be applied.

This paper is a work in progress. It is an extended and updated version of earlier work, more in particular of a paper presented at the 42 TPRC conference (Arlington, September 2014). The most relevant changes include an updated and more detailed addition on case law and on the revised regulatory framework due to the new European Telco regulation.

Does net neutrality work? The Dutch case

Nico van Eijk¹

1. Net neutrality in the Netherlands²

The Netherlands is among the countries that have put specific net neutrality standards in place. The Netherlands was the first country to do so in the European Union. The decision to implement specific regulation was influenced by at least three factors. The first was the prevailing social and academic debate, partly due to developments in the United States.³ The second was the implementation of the amended European regulatory framework for the communication sector.⁴ Concrete developments in the Dutch market were the third factor.

In this section, these concrete developments are discussed first, followed by a description of how the Dutch regulation regarding net neutrality came to be.

This paper is not intended to discuss the conceptualisation and details of net neutrality as such.⁵

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² In this paper, there are frequent references to sources that (unfortunately) are only available in Dutch. Nevertheless, references to these sources are included to ensure that the information provided in this paper is adequately accounted for.

³ Starting with the conceptualisation of Net Neutrality (Lessig, L. & McChesney, R.W. (2006) 'No Tolls on The Internet,' *The Washington Post*, 8 June. Online available HTTP: <http://www.washingtonpost.com/wp-dyn/content/article/2006/06/07/AR2006060702108.html>; Wu, T. (2003) 'Network Neutrality, Broadband Discrimination,' *Journal on Telecommunications and High Technology Law*, Vol. 2, 2003: 145-176. Online Available HTTP: http://www.jthtl.org/content/articles/V2i1/JTHTLv2i1_Wu.PDF (accessed 27 April 2012) and the regulatory intervention by the FCC resulting in its Report and Order, In the Matter of Preserving the Open Internet; Broadband Industry Practices; GN Docket No. 09-191, WC Docket No. 07-52, December 21 (Released December 23).

⁴ Resulting in two Directives amending the old framework: European Parliament and Council of the European Union 'Directive 2009/136/EC of 25 November 2009' (Citizens' Rights Directive), in Official Journal of the European Union, L 337, 18 December 2009. Online available (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0011:0036:En:PDF>) and European Parliament and Council of the European Union 'Directive 2009/140/EC of 25 November 2009' (Better Regulation Directive), in Official Journal of the European Union, L 337, 18 December 2009. Online available (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0037:0069:EN:PDF>).

⁵ See the work of many excellent authors and also: P. Nooren, A. Leurdijk and N.A.N.M. van Eijk, *Net neutrality and the value chain for video*, info, 2012-6, pp. 45-58 (<http://www.emeraldinsight.com/journals.htm?articleid=17056608>); N.A.N.M. van Eijk, *Net Neutrality and Audiovisual Services*, IRIS Plus, 2011-5, pp. 7-19.

1.1 Some background

Before and at the time of introduction of the Dutch net neutrality regulation, there were several incidents that impacted the debate on net neutrality. Net neutrality first caught attention in the public debate in a discussion in 2009 about whether or not Skype should be blocked by mobile providers. In response to questions in parliament, the imminent European regulation was referred to.⁶ However, the government responded to questions from parliament by stating that “it would be overstepping the mark to say that the use of Internet services by telecom providers may not be blocked in any way.” Interference should be possible in particular in the case of significant market power of one or multiple market players, but according to the Secretary of State “we currently do not have a situation of this type”.

Two subsequent incidents further increased the attention for net neutrality.⁷

In reports published in the Dutch media in 2009, second-largest cable operator UPC (1.7 million subscribers)⁸ was said to throttle peer-to-peer traffic. Spokespersons confirmed that UPC was making use of ‘traffic shaping’. This led to questions in parliament, and the regulator started an investigation.

In April/May 2011, mobile providers indicated that they intended to implement further activities in the field of traffic management, involving traffic throttling, blocking certain applications or requesting compensation for the use of certain applications. These announcements coincided with growing concern for traditional call traffic and SMS traffic being lost to applications like Skype and WhatsApp. The interview with a senior KPN executive had huge impact. He said: “We will not block services, but we will try to price them, or we will price them” and “We are able to identify what – DPI – what is actually the destination of specific data packages.”⁹ Again, members of parliament asked questions. OPTA, the telco regulator, started an investigation. The public prosecutor also looked into

(http://www.ivir.nl/publications/vaneijk/IRIS_Plus_2011_5.pdf) and N.A.N.M. van Eijk, *About Network Neutrality 1.0, 2.0, 3.0 and 4.0*, Computers & Law Magazine, 2011-6(http://www.ivir.nl/publications/vaneijk/CLM_2011_6.pdf).

⁶ *Aanhangsel Handelingen II* (Appendix Official Report), 2008/09, nrs 2765 and 2766.

⁷ Described in more detail in Chapter 3.

⁸ UPC is owned by Liberty Global Group (<http://www.libertyglobal.com>). In 2014 UPC merged with Ziggo, creating a cable operator with a 44% market share in broadband (NRC-Q, 2014).

⁹ Quotes are from: http://pulse.companywebcast.nl/player/v1_0/default.aspx?id=12193&bb=true&swf=true (segment at 3hrs 33mts).

the question if this was contrary to the provisions of Dutch Criminal Law (see Section 2.2.2), more in particular to the provisions on unauthorised wiretapping.

1.2 Towards EU and national regulation

Attention to net neutrality becomes clearly evident in the European discussion on amending the European framework for the communication sector. This debate came to a climax during the negotiations between the European Council and the European Parliament. The parties involved, particularly the industry on the one hand and NGOs on the other hand, were lobbying actively, and their viewpoints were paid attention to in the media.¹⁰ This led to Article 8 in the Framework Directive and Articles 21 and 22 in the Universal Services Directive, as adopted in 2009.¹¹ These provisions set out the European framework on net neutrality (transparency and quality of service criteria).

Framework Directive

Article 8.4g "(...) promoting the ability of end-users to access and distribute information or run applications and services of their choice";

Universal Services Directive

Article 21, 3d: "(...) provide information on any procedures put in place by the provider to measure and shape traffic so as to avoid filling or overfilling a network link, and on how those procedures could impact on service quality";

Article 22, 3: "In order to prevent the degradation of service and the hindering or slowing down of traffic over networks, Member States shall ensure that national regulatory authorities are able to set minimum quality of service requirements on an undertaking or undertakings providing public communications networks."

The Dutch government opted for using an Internet consultation procedure to implement the amended European rules, which started in April 2010.¹² This kind of procedure is not compulsory, but it is applied in the event of more controversial subjects ('testing the water') or when the

¹⁰ See for example the 2010 position paper of Dutch NGO Bits of Freedom (BOF): <https://www.bof.nl/live/wp-content/uploads/Position-Paper-netneutraliteit.pdf>, but also the activities of organisations such as EDRI (www.edri.org) and La Quadrature du Net (<http://www.laquadrature.net/>) drew attention.

¹¹ See figure. For a consolidated version of the directives, see: <http://ec.europa.eu/digital-agenda/en/telecoms-rules>.

¹² <http://www.internetconsultatie.nl/nrfimplementatie>.

stakeholders' structured input is sought.¹³ In the preliminary draft for legislation, which was the subject of the consultation, the principle had been that implementation was to be restricted to a minimum conversion into national law.¹⁴ 'Gold plating' had to be prevented as much as possible. The proposed provision on net neutrality was therefore restricted to prescribing transparency and providing the possibility of further regulation. A lot of reactions were the result, advocating a more material, more concrete approach to net neutrality. These reactions were partly caused by a call from Bits of Freedom,¹⁵ a very active NGO, to react. Not surprisingly, the reactions of the market parties were primarily focused on keeping the net neutrality regulation as restricted as possible. In its reactions to the consultation, the government indicated it did not want to work towards further, more detailed regulation, but it committed itself to provide some additional explanation in the explanatory memorandum to the definitive legislative proposal.¹⁶

In the build-up to the legislative proposal, an active lobby was started to achieve a more substantial form of net neutrality. For instance, several concepts of legal provisions were discussed with political parties.

The legislative proposal sent to parliament in November 2010 was in line with the earlier reaction to the preliminary draft of the consultation:¹⁷ introduction of transparency towards the end-user and the possibility to continue developing net neutrality on the basis of further rules. The fact that various political parties were interested in the subject was revealed by their written questions about the bill. The government's answers were restricted to explaining the chosen approach again. Parliament was not satisfied with the answer and passed a resolution asking the government to come up with a material regulation of net neutrality.¹⁸ The resolution included explicit reference to the intention of market parties to block or charge for certain services.

It is more than symbolic that the first amendment submitted to the legislative proposal concerned net neutrality. The representative of D'66 (liberal democrats) proposed the introduction of a new provision 7.4a regulating several material aspects of net neutrality.¹⁹ Gradually, support for the

¹³ Starting 2014, the Internet consultation procedure will become obligatory for all law proposals.

¹⁴ Proposal/Explanatory memorandum: <http://www.internetconsultatie.nl/nrfimplementatie/document/122> and <http://www.internetconsultatie.nl/nrfimplementatie/document/123>

¹⁵ www.bof.nl.

¹⁶ Results and conclusions of the consultation (in Dutch): <http://www.internetconsultatie.nl/nrfimplementatie>

¹⁷ *Kamerstukken* (Parliamentary documents) II, 2010-2011, 32549.

¹⁸ *Kamerstukken* (Parliamentary documents) II, 2010-2011, 24095, nr 281.

¹⁹ *Kamerstukken* (Parliamentary documents) II, 2010-2011, 32549, nr 10.

proposal grew. The final draft of the amendment was signed by a majority in parliament.²⁰ The government²¹ made the best of a bad job and accepted the amendment with open arms.²² Two small Christian parties in parliament proposed a sub-amendment.²³ On the basis of this sub-amendment, an exception was made to the proposed blocking prohibition for 'ideological reasons'. The minister left it to parliament to judge this sub-amendment.²⁴ In June 2011, parliament adopted the amendment and by mistake also the sub-amendment. Soon after this, the adoption of the sub-amendment was cancelled. The discussion in the Senate did not yield any additional viewpoints, and on 4 June 2012 the act was published in the Dutch Bulletin of Acts, Orders and Decrees.²⁵ The effective date of the net neutrality provision was fixed for 1 January 2013 to give the market parties ample opportunity to prepare sufficiently.

1.3 Net neutrality in the Telecommunications Act

The implementation of net neutrality in the Telecommunications Act is spread over two articles, with the core of the regulatory framework stated in Article 7.4a in a definition of net neutrality. The second part of the implementation regards the transparency principle. This can be found in Article 7.3 of the act.

The article on net neutrality has a very extensive explanatory memorandum. The following aspects of the article can be considered crucial:

- a) No distinction is made between wireless and wired networks.
- b) In paragraph 1.a, it is clarified that congestion management is allowed but should be applied in a non-discriminatory way. It is not allowed to prioritise one service over another.
- c) Charging based on services and applications is forbidden, without any exceptions.
- d) From the explanatory memorandum it is clear that the provisions only regulate the 'open Internet' rather than managed Internet services.

²⁰ *Kamerstukken* (Parliamentary documents) II, 2010-2011, 32549, nr 29. The majority consisted of almost all political parties with the exception of the two parties that had formed the government (conservatives and Christian democrats).

²¹ A minority government that did not have a majority in parliament and therefore depended on the support of opposition parties, including the PVV (Geert Wilders' political party) with which it had entered into a tolerance agreement.

²² *Kamerstukken* (Parliamentary documents) II, 2010-2011, 32549, nr 37.

²³ *Kamerstukken* (Parliamentary documents) II, 2010-2011, 32549, nr 33.

²⁴ *Kamerstukken* (Parliamentary documents) II, 2010-2011, 32549, nr 42.

²⁵ Dutch Bulletin of Acts, Orders and Decrees 2011, 235 and 236 dd. 4 June 2012.

Net neutrality:

Article 7.4a

1. *Providers of public electronic communications networks via which Internet access services are delivered and providers of Internet access services shall not hinder or slow down applications or services on the Internet, unless and to the extent that the measure in question with which applications or services are being hindered or slowed down is necessary:*
 - a. *to minimise the effects of congestion, whereby equal types of traffic must be treated equally;*
 - b. *to preserve the integrity and security of the network and service of the provider in question or the end-user's terminal;*
 - c. *to restrict the transmission to an end-user of unsolicited communication within the meaning of Article 11.7(1), provided that the end-user has given its prior consent for this to be done;*
 - d. *to implement a legislative provision or court order.*
2. *If an infraction of the integrity or security of the network or the service or a terminal of an end-user, as referred to in (b) of the first paragraph, is being caused by traffic coming from the terminal of an end-user, the provider, prior to taking the measure which hinders or slows down the traffic, must notify the end-user in question, in order to allow the end-user to terminate the infraction. Where the required urgency means that this is not possible prior to the measure being taken, the provider must give notice of the measure as soon as possible. The first sentence shall not apply where this concerns an end-user of a different provider.*
3. *Providers of Internet access services shall not make their charges for Internet access services dependent on the services and applications which are offered or used via said services.*
4. *Specific rules with regard to the provisions in paragraphs 1 to 3 may be provided by way of a general administrative order. The proposal for a general administrative order as provided for under this paragraph shall not be made earlier than four weeks after the draft has been submitted to both Houses of the States General.*
5. *In order to prevent the degradation of service delivery and the hindering or slowing down of traffic via public electronic communications networks, minimum requirements regarding the quality of service of publicly available electronic communications services may be imposed by or pursuant to a general administrative order on providers of public electronic communications networks.*

The transparency obligation regarding net neutrality from the European Framework is part of another general article in the Telecommunications Act (Article 7.3), which is about disclosure of

information by providers of public telecommunications networks and services to end-users. The text reads as follows:

Transparency:

Article 7.3:

(...)

4. *Rules may be set by ministerial order regarding the information to be provided by the provider of public electronic communications networks or publicly available electronic communications services to end-users and to our Minister regarding:*

(...)

c. the measures taken by the provider in the case of congestion and the consequences thereof for the quality of service delivery;

(...)

The rules on net neutrality have been laid down in further detail in a special ministerial order, stipulating that providers need to inform end-users on “measures for measuring and controlling traffic with the purpose of preventing a network connection from being filled to its maximum capacity or overflowing, and the way in which these procedures may have consequences for the quality of services.”²⁶

1.4 Policy guideline for ‘zero rating’

Right after the new provisions had been adopted and had taken effect, questions arose whether bundled offers by mobile operators complied with the rules. Various operators combined Internet access with ‘free’ services. The traffic of these services was not charged to the data subscription. Did such offers represent a form of discrimination that was not allowed by the net neutrality provision, more in particular paragraph 3 of Article 7.4a of the Telecommunications Act? The explanatory memorandum provided some guidance:

²⁶ Article 3.5a of the *‘Besluit universele dienstverlening en eindgebruikersbelangen’* (universal services and end-user interests) (Dutch Bulletin of Acts, Orders and Decrees. 2012, 236).

It is clear that the term Internet access service should be interpreted broadly, to prevent circumvention of this provision. If access to websites, multiple services or applications, including apps, is offered, this should at any rate be considered an Internet access service. It is, therefore, at any rate not allowed to offer a service consisting of access to (certain) web pages, services or applications, where the use of certain applications or services are blocked or priced differently. This means that providers are allowed to offer separate services over the Internet, but may not offer packages to access a part of the Internet. Of course, providers may differentiate their subscriptions for Internet access or in other ways, such as bandwidth and data limits.

This restriction on the behaviour of providers of Internet services is necessary to ensure open and unrestricted access to the Internet for (online) service providers, citizens and business. It should be prevented that Internet access service providers block or restrict specific information or services.

In the view of the government, offering a (free) service in combination with an Internet access service is therefore not allowed. A draft guideline was put out for consultation.²⁷ A final text entered into force in May 2015, confirming the explanatory memorandum by turning it into a rule.²⁸ Only providing access to a single service via Internet access is excluded from the scope of Article 7.4a. Offering a (free) service in combination with an Internet access service is therefore not allowed.

1.5 Extension of net neutrality to broadcasting distribution networks

Content-related access issues have a rich history in the Netherlands when it comes to a related domain: the distribution of television programmes via cable television networks. The Netherlands is among the most densely cabled countries in the world (homes passed > 90%), making content distribution via these networks essential for service providers. Meanwhile, the market share of cable operators with respect to content distribution has decreased to approximately 66% (homes connected). The introduction of IP television, primarily provided by incumbent KPN, is the major cause of this decrease. The present strong competition between the two dominating networks is the main reason why the ACM refrained from regulating the CATV networks (based on the EU

²⁷ <http://www.internetconsultatie.nl/netneutraliteit>. The consultation ended on 30 May.

²⁸ *Besluit van de Minister van Economische Zaken van 11 mei 2015, nr. WJZ/15062267, houdende beleidsregel inzake de toepassing door de Autoriteit Consument en Markt van artikel 7.4a van de Telecommunicatiewet (beleidsregel netneutraliteit* (Decision of the Minister of Economic Affairs of 11 May 2015, nr WJZ/15062267, concerning policy rule on applying Article 7.4a of the Telecommunications Act (policy rule net neutrality) by the Authority Consumer and Market), Dutch Bulletin of Acts, Orders and Decrees 13478 dd. 15/5/2015.

framework). This decision was upheld in court. Nevertheless, parliament introduced two amendments (to the Telecommunications Act and to the Media Act) as part of the implementation of the new European telecommunications framework to regulate wholesale access to the so-called 'analogue basic package'. However, these provisions have been challenged by the European Commission, which started infraction proceedings against the Netherlands. In the meantime, a Dutch court declared both measures null and void because they are not in compliance with the EU framework.²⁹ The government has announced that it will withdraw the provisions.

Although must-carry rules were put in place³⁰ in the past decades, there have been several disputes on access to CATV networks. The launch of channel Sport 7 in 1996 is a classic example. Sport 7 obtained the rights to the Dutch soccer competition but failed because no distribution contracts could be entered into.

In July 2013, a provision was launched – and later adopted – via an amendment to the Dutch Media Act, which “makes it possible to prescribe a form of net neutrality on cable television networks.”³¹ With further ministerial regulation it will be possible to designate services, the signal of which has to be passed on as an integral part of the programme channels. Rules can also be set for the transmission of these types of services. The provision is intended to prevent blocking of certain facilities, such as teletext, subtitling for the disabled, and HbbTV signals (interactivity). These signals are normally sent along with the broadcast signal. It is presumed that the government will first negotiate with the parties involved to come to a voluntary solution. Any measures to be imposed should be in line with European law. In the explanatory memorandum to the provision, the net neutrality regulation is referred to explicitly.

²⁹ Court of The Hague, 29 January 2014 (ECLI:NL:RBDHA:2014:1004).

³⁰ Giving preferential access right to public broadcasting channels (national, regional and local).

³¹ *Kamerstukken* (Parliamentary documents) II, 33426, nr 40.

2. New rules on net neutrality

The Dutch implementation of net neutrality was widely commented upon. Most of the reactions were positive and underlined the fact that – contrary to the vague European approach – a more tailor-made regimen was put in place.

Reactions from Brussels were more nuanced. The initial remarks of the European Commission on the Dutch net neutrality provision were quite negative. In May 2012, Commissioner Kroes said: “I also asked European national legislators and regulators to wait for better evidence before regulating on an uncoordinated, country-by-country basis that slows down the creation of a Digital Single Market.”³² This is a clear reference to the Dutch rules, which she had previously called ‘premature’. However, no further action was taken to revoke the Dutch net neutrality rules, but the European Commission started a process to create more binding European rules on net neutrality.

2.1 EU Net Neutrality Regulation

Europe has followed the Dutch example and introduced more specific net neutrality rules as part of regulation in which measures are laid down concerning the European single market for electronic communications and to achieve a Connected Continent.³³

In the originally proposed Article 23, end-users are guaranteed access to the open Internet, but they can enter into agreements with access providers on data volumes and speeds (paragraph 1). They are also free to agree with access and content/applications/service providers on the provision of ‘specialised services’ with an enhanced quality of service (paragraph 2). Specialised services are services that have an end-to-end controlled environment and are not marketed or used as a substitute for Internet access services (Article 2.15). A safety valve has been built in: the provisioning of specialised services shall not impair the general quality of Internet access services repeatedly or continuously.

In line with the Dutch text, blocking, slowing down, degrading or discriminating against specific content/applications/services is not allowed, unless it is necessary in the context of reasonable traffic

³² http://ec.europa.eu/commission_2010-2014/kroes/en/blog/netneutrality.

³³ Proposal for a regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent - COM(2013) 627, Brussels, 11/9/2013.

management and for four purposes specified which are more or less similar to the ones mentioned in Article 7.4a of the Dutch Telecommunications Act.

In a separate provision, Article 25, the powers of the national regulators to impose quality of service criteria is further detailed. It includes reporting and coordination obligations involving the European Commission and BEREC (the cooperation platform of the telco regulators of the EU member states).

The European parliament introduced several amendments to strengthen the net neutrality-concept.³⁴ One of the main amendments further reduces the margin of appreciation for the introduction of specialised services. These services shall only be offered “if the network capacity is sufficient to provide them in addition to Internet access services and they are not to the material detriment of the availability or quality of Internet access services. Providers of Internet access to users shall not discriminate between such services.” Other modifications have largely the same impact: introducing more specifications and setting limits for the providers of Internet access services. The final text of the new regulation was published in the Official Journal of 26 November 2015 (hereinafter referred to as: ‘Net Neutrality Regulation’ or ‘Regulation’).³⁵ It conceptualises the safeguarding of the open Internet as the right of end-users “to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of the end-user’s or provider’s location or the location, origin or destination of the information, content, application or service, via their Internet access service” (Article 3, paragraph 1). This basic rule is confirmed by the second paragraph of Article 3 in which it says that the agreements between Internet access providers and end-users on commercial and technical conditions and the characteristics of Internet access services such as price, data volumes or speed, and any commercial practices conducted by Internet access providers shall not limit the exercise of these rights. The third paragraph deals with the non-discrimination principle and obliges operators to treat all traffic equally, irrespective of the sender/receiver, the content, etc. However, reasonable traffic management is allowed but needs to meet the traditional criteria on transparency, non-discrimination and proportionality.

³⁴ [http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2013/0309\(COD\)&l=en](http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2013/0309(COD)&l=en)

³⁵ Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 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, Pub L. 310/1 dd. 26/11/2015.

Article 3: Safeguarding of open Internet access

1. End-users shall have the right to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of the end-user's or provider's location or the location, origin or destination of the information, content, application or service, via their Internet access service.

This paragraph is without prejudice to Union law, or national law that complies with Union law, related to the lawfulness of the content, applications or services.

2. Agreements between providers of Internet access services and end-users on commercial and technical conditions and the characteristics of Internet access services such as price, data volumes or speed, and any commercial practices conducted by providers of Internet access services, shall not limit the exercise of the rights of end-users laid down in paragraph 1.

3. Providers of Internet access services shall treat all traffic equally, when providing Internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.

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.

Providers of Internet access services shall not engage in traffic management measures going beyond those set out in the second subparagraph, and in particular shall not block, slow down, alter, restrict, interfere with, degrade or discriminate between specific content, applications or services, or specific categories thereof, except as necessary, and only for as long as necessary, in order to:

- (a) comply with Union legislative acts, or national legislation that complies with Union law, to which the provider of Internet access services is subject, or with measures that comply with Union law giving effect to such Union legislative acts or national legislation, including with orders by courts or public authorities vested with relevant powers;*
- (b) preserve the integrity and security of the network, of services provided via that network, and of the terminal equipment of end-users;*
- (c) prevent impending network congestion and mitigate the effects of exceptional or temporary network congestion, provided that equivalent categories of traffic are treated equally.*

4. Any traffic management measure may entail processing of personal data only if such processing is necessary and proportionate to achieve the objectives set out in paragraph 3. Such processing shall be carried out in accordance with Directive 95/46/EC of the European Parliament and of the Council. Traffic management measures shall also comply with Directive 2002/58/EC of the European Parliament and of the Council.

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.

Traffic management needs to be based on technical criteria and not on commercial considerations (paragraph 4). The same paragraph confirms the non-blocking principle with exceptions for a) compliance with the law, orders by court or public authorities vested with relevant powers; b) network integrity; and c) the network congestions. The provisioning of 'special services' continues to be allowed but needs to meet the restrictions as mentioned before: special services may only be offered or facilitated if the network capacity is sufficient to provide them in addition to any Internet access services provided. Furthermore, special services shall not be usable or offered as a replacement for Internet access services and shall not be to the detriment of the availability for general quality of Internet access services for end-users (paragraph 5).

The transparency rules are detailed in Article 4 of the Regulation, while supervision, oversight and penalties are dealt with in Articles 5 and 6.

2.2 The Dutch implementation of the EU Net Neutrality Regulation

During the legislative process resulting in the adoption of the Regulation, the Dutch government consistently defended its own net neutrality rules. Although the adopted text of the regulation has a lot in common with the Dutch framework, a very intense debate took place on 'zero rating', the possibility to offer services in combination with Internet access without charging for the data traffic. Under paragraph 3 of Article 7.4a of the Dutch Telecommunications Act, any form of discrimination, including zero rating, is strictly forbidden. This was confirmed in the cases by the regulator and upheld by the courts in first instance (appeals are pending).

In the implementation proposal as send to the Dutch Parliament, the dissatisfaction with the outcome of the Brussels process, is explicitly mentioned.³⁶ In the proposal, the first four paragraphs of Article 7.4a are deleted, the fifth paragraph remains, and a paragraph is added, giving the Dutch government the powers to impose general rules on providers of public electronic communications networks and services, including Internet access providers, by or pursuant to a general administrative order. The transparency rules in the Telecommunications Act remain unchanged. As to the discrimination aspect, the government argues that not all hope is lost, because general competition law is still applicable.

³⁶ Proposal to change the Telecommunications Act in order to implement the Net Neutrality Regulation ('*wijziging van de Telecommunicatiewet ter uitvoering van de netneutraliteitsverordening*', *Kamerstukken* (Parliamentary documents) II, 2015/16, 34379).

Extensive debate in parliament is followed by a government proposal to amend the original text and to reintroduce the non-discrimination provision: “Providers of Internet access services shall not make their charges for Internet access services dependent on the services and applications which are offered or used via said services.”³⁷ According to the explanatory memorandum, such a provision is still compatible with the Regulation. Price discrimination negatively effects the rights of end-users as protected by Article 3, paragraph 2 of the regulation (“Agreements between providers of Internet access services and end-users on commercial and technical conditions and the characteristics of Internet access services such as price, data volumes or speed, and any commercial practices conducted by providers of Internet access services, shall not limit the exercise of the rights of end-users laid down in paragraph 1”). Furthermore, the Dutch government argues that price discrimination is in conflict with Article 3, paragraph 3 (“Providers of Internet access services shall treat all traffic equally, when providing Internet access services, without discrimination, restrictions of interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.”).

Parliament applauds the shift and supports the reasoning of the government. It also accepts an amendment which obliges the government to set rules on congestion and special services at least.³⁸ The original text did not contain an obligation like this but only made it possible to set additional rules.

³⁷ *Kamerstukken* (Parliamentary documents) II, 34379, nr. 7.

³⁸ *Kamerstukken* (Parliamentary documents) II, 34379, nr. 8.

3. Application of net neutrality rules: the cases

3.1 Role of the national regulatory authority

The concrete application of the regulation has been submitted to the ACM (the Authority for Consumers and Markets).³⁹ The ACM is also charged with supervising compliance and enforcement.

After the Dutch net neutrality rules had taken effect, the ACM did not issue any further directives or guidelines. On its website, it only provided a summary of the rules and referred to the possibility of reporting complaints. It has been suggested that the ACM preferred additional European rules on net neutrality. In this context, a critical presentation at an international conference was referred to, in which it is also said that the ACM is held to execute the law.⁴⁰

Nevertheless, the ACM had to deal with various cases. Some of them started before the Dutch implementation of the original framework, others have been investigated and decided on, based on the new law and on an interpretative guideline by the Dutch Government. In this chapter, the various cases are presented. Some of these have not been documented directly by the regulator by means of a written decision but are based on publicly available information in the media and on oral information from various sources.

3.2 Cases before the (implementation of) the EU framework

3.2.1 Throttling traffic

The first case concerned traffic throttling by cable operator UPC (as mentioned in paragraph 1.1). Network management reduced the speed for downloading via peer-to-peer file sharing and newsgroups. According to the findings of the investigation by the telco regulator, UPC had taken

³⁹ In April 2013, OPTA was replaced by the ACM.

⁴⁰ http://www.ancom.org.ro/uploads/links_files/2012_Net_Neutrality_Remko_Bos.pdf.

measures, and the practice was believed to be not structural.⁴¹ If there were a structural restriction of Internet speed in the use of certain services, it would have to be regarded as an amendment of the contract with the end-users. In such case, end-users should have the opportunity to terminate the contract, according to OPTA. Besides the letter no further action was taken by the regulator, but the case was reported in the media and resulted in questions in parliament focusing on both net neutrality and unfair business practices.⁴² The answers by the minister mainly confirmed what was said in the letter of the regulator.

3.2.2 Using DPI for traffic management

After the WhatsApp incident (paragraph 1.1), OPTA immediately made a provisional inquiry among the providers of mobile networks (KPN, Vodafone, T-Mobile and Tele2) into the intention of implementing traffic management and payment models for services/apps. This 'Quickscan' was performed in collaboration with the supervisory authority on privacy, CBP (*College Bescherming Persoonsgegevens*, the Dutch Data Protection Authority).⁴³ The Quickscan results confirmed that all parties involved used techniques for structurally analysing data packages that were transported across their mobile networks (Deep Packet Inspection, DPI).⁴⁴ No signs were found that the providers investigated read their subscribers' e-mail messages, viewed photographs sent, or read contributions to social networks (although it was confirmed that this was technically possible).⁴⁵ Simultaneously, it was found that in their analysis providers took cognizance of more data than merely information intended for handling traffic, including tracking applications such as WhatsApp, GoogleTalk and Twitter. Both authorities did not rule out the possibility of a breach of the freedom of communication/communications secrecy⁴⁶ or the applicable privacy rules,⁴⁷ but in anticipation of a definitive investigation they saw no reason yet to take enforcement measures. Further investigation was to follow, led by the CBP.

⁴¹ Letter to UPC dd. 13 November 2009, ref: OPTA/ACNB/2009/203147.

⁴² *Aanhangsel Handelingen II* (Appendix Official Report), 2009/10, nr 526.

⁴³ In 2016, the name of the CBP was changed into AP (*Autoriteit Persoonsgegevens*/ Dutch Data Protection Authority).

⁴⁴ For everything on DPI, see Milton Mueller's DPI project: <http://dpi.ischool.syr.edu/Home.html>.

⁴⁵ Memo OPTA dd. 30 June 2011, reference: OPTA/ACNB/2011/201469.

⁴⁶ As guaranteed in the Dutch Constitution (Article 13) and in the Telecommunications Act (Article 18.13).

⁴⁷ As laid down in the Dutch Data Protection Act (*Wet Bescherming Persoonsgegevens*): http://www.dutchdpa.nl/Pages/en_ind_wetten_wbp.aspx

The definitive investigation into DPI practices of mobile providers was completed in 2013.⁴⁸ From the reports by the CBP published in July 2013 it became clear that in the supervisory authority's opinion most providers took insufficient care when dealing with personal details (untimely anonymisation or deletion, shortcomings with respect to transparency and obtaining end-user consent). Market parties took additional measures or promised to do so. In one case, DPI data was used for marketing purposes. The CBP did not impose any specific sanctions but announced it would verify to what extent the violations found continued, after which decisions would be made on imposing enforcement measures.

The criminal investigation in this DPI case confirmed that KPN had its analysis software extended to recognise and monitor applications like Hyves, WhatsApp and Viper.⁴⁹ The communication content, however, was believed to be excluded from the analyses. Therefore, the exploratory investigation did not yield any indication that KPN was guilty of illegally tapping its end-users. Consequently, there was no reason to suppose there was any punishable behaviour and that a formal criminal investigation had to be conducted.

3.3 Cases based on the implementation of the EU framework

3.3.1 Managing congestion

In December 2013, the ACM took a first decision on applying the new rules. It dealt with Internet access in trains. Passengers on most Dutch trains have free Internet access. The service, called 'T-Mobile HotSpot in de trein', was provided by T-Mobile, based on a contract with Dutch Railways (Nederlandse Spoorwegen, NS).⁵⁰ In order to get the signal into the moving trains, T-Mobile uses its 2G/3G mobile network. The architecture of this network is focused on voice services and on keeping them available under varying circumstances. The rest of the capacity is used for data traffic. The data service (needed for Internet access) on board fluctuates strongly, due to the high speed of trains. To counter this problem, T-Mobile decided to block all peer-to-peer and streaming services (YouTube, Netflix) and to slow down file transfer. It claimed that without these measures there would be

⁴⁸ http://www.dutchdpa.nl/Pages/en_pb-20130704-analysis-mobile-data.aspx

⁴⁹ This investigation has not been disclosed publicly, but the conclusions can be found in a letter from the Minister of Security and Justice to parliament (*Kamerstukken II*, 2010/11, 32549, nr 45).

⁵⁰ In April 2014, Dutch Railways took over the responsibility from T-Mobile.

congestion and a lack of capacity. Users, having to share the available connection and capacity, would not be able to use the connection in a practical manner.

In a two-page letter,⁵¹ the regulator accepts the argument that the blocking and slow-down is necessary to remedy the consequences of congestion. The information provided by T-Mobile also led them to assume that all services are treated equally (no discrimination, everything is blocked).

3.3.2. Blocking services

In May 2013, app provider RBN bv filed a complaint about blocking practices by incumbent KPN. Their RingCredible app offered a service similar to WhatsApp allowing Voice over IP (VoIP). Passengers travelling via Schiphol Amsterdam Airport were offered free Internet access by KPN. It was a basic service with certain restrictions not only offered at Schiphol but also at 176 locations in total throughout the Netherlands. Besides limitations in duration and speed, the service did not allow smartphones to make calls using VoIP, including the app as provided by RBN. However, KPN also offered a – paid – premium service without blocking VoIP. Probably due to investigations started by ACM, KPN terminated the blocking in early July 2013.

The regulator concluded that blocking services constitutes an infringement on the net neutrality rules of Article 7.4a, paragraph 1. KPN should change its services after the adoption of the Net Neutrality Regulation according to the ACM. The fact that the rules were new, resulted in a mitigated sanction of EUR 250K.⁵² RBN filed an appeal against the decision, but it was rejected by the ACM.⁵³ The company filed for bankruptcy in June 2016.

3.3.3 Zero-rating cases

The first two cases on zero rating are on practices before the Net Neutrality Regulation took effect on 1 January 2013. Based on an investigation conducted by the regulator in early 2013, Vodafone modified its Sizz service – a videostream service in cooperation with RTL – by separating the Internet access service and access to the video stream app, thus making Sizz a stand-alone product. The

⁵¹ <https://www.acm.nl/nl/download/publicatie/?id=12508>

⁵² Decision ACM of 18 December 2014, case no. 14.0875.31, ACM/DJZ/2014/207376.

⁵³ Mainly on formal grounds. Decision ACM of 7 April 2015, case no. 14.0875.31.1.01, ACM/DJZ/2015/201646_OV.

regulator, confirming that blocking or the prioritisation of traffic was not at stake, concluded that such a separation rendered the service compliant with the regulation.⁵⁴ A similar approach was chosen in the Spotify case. The regulator concluded that the Spotify service was offered by KPN as a separate and independent service on top of the subscription.⁵⁵

Vodafone became the subject of a second investigation. This time it concerned the HBO-GO app. During a limited period of three months, access to this app was not charged or taken from the subscriber's data package. The ACM did not follow the argument of the previous Sizz case, because there was no separation between the data service and the app. Therefore, Vodafone was not in compliance with the third paragraph of the net neutrality provision. Because Vodafone should have known better given its earlier experiences, the ACM saw no mitigating (nor aggravating) circumstances and imposed a EUR 200K fine.⁵⁶

Vodafone appealed against the decision before the Court of Rotterdam (the special court for telco cases). The court not only ruled in favour of the ACM, but also confirmed the strict interpretation of the net neutrality provision. Vodafone claimed that its service would be compliant with the EU Net Neutrality Regulation, which was a draft version at the time, but the court concluded that this text had no official standing as it had not entered into force.

3.4 Enforcement of the new rules

The EU Net Neutrality Regulation entered into force on 30 April 2016. Because of its nature (a regulation and not a directive) it does not require national implementation. The ACM used the occasion to warn telecom companies about the Regulation, but it also mentions the fact that the Dutch implementation act (paragraph 2.2) still needs to be passed by the Senate (*Eerste Kamer*). Furthermore, the ACM points out that BEREC, the cooperation of telco regulators, has not yet finalised its guidelines on net neutrality (expected on 30 August 2016).⁵⁷

⁵⁴ Mentioned in the annual report of 2013 (<https://jaarverslag.acm.nl/nieuwe-wetgeving-netneutraliteit>). Letter to Vodafone of 18 November 2013, no. 2012205933, ACM/DTVP/2013/202595.

⁵⁵ <http://tweakers.net/nieuws/93502/hi-haalt-verbruik-spotify-app-niet-meer-van-databundel-af.html>

⁵⁶ Decision ACM of 18 December 2018, case no. 14.0876.31, ACM/DJZ/2014/207383.

⁵⁷ Berec held a consultation on these guidelines (http://berec.europa.eu/eng/news_consultations/Closed_Public_Consultations/2016/). As these guidelines have not yet entered into force, we do not discuss them in this version of the paper.

4. Analysis

In this section, the impact of net neutrality on the national policy is briefly discussed. Next, some critical comments about the current regulation are provided, both in general and based on the first cases that were investigated by the regulator. Finally, some wider considerations are given with respect to the net neutrality problem.

4.1 Policy aspects

The history of how the Dutch net neutrality provision came to be, shows that there has been a major shift in the regulation and policy-making process. Originally, it had been proposed that the rules of the European Framework should be complied with slavishly, but eventually a detailed material regulation of net neutrality was opted for.

A choice for the regulation also meant a choice for the principle of an open Internet. This is important for both the providers of information services and the end-users. More important interests, such as the freedom of speech, also benefit from such approach. Even though the Netherlands may sometimes boast a high level of freedom of communication, it is a good idea to lay it down in rules.

The chosen regulation is further expected to contribute to innovation. This was one of the reasons why the government backed the amendment proposed by parliament. Governmental support for the 'Dutch solution' has increased ever since. The Netherlands has explicitly distanced itself from ETNO proposals (the association of European Telecommunications Network Operators), in which telecom providers were given a leading role with respect to access to their networks.⁵⁸ The same happened with initiatives in the context of the ITU conference in Dubai.⁵⁹ Finally, the Netherlands voted against the Net Neutrality Regulation⁶⁰

In two studies commissioned by the Dutch government, the importance of an 'open Internet' strategy is also stressed. In an Analysys Mason study, open access is positioned as a wider concept

⁵⁸ *Aanhangsel Handelingen II* (Appendix Official Report), 2012/13, nr 165.

⁵⁹ *Kamerstukken* (Parliamentary documents) II, 2012/13, 24095, nr 330.

⁶⁰ *Kamerstukken* (Parliamentary documents) II, 2014/15, 21501-33, nr 552.

which also plays a part in the current discussion on connected TV.⁶¹ In a second economic study by SEO, it is concluded that “Network neutrality enhances innovations by small content and application providers (CAPs), but it also provides benefits for large CAPs and Internet service providers (ISPs). Network neutrality affects innovation incentives positively by effectively reducing market power of Internet service providers and increasing connectivity between end-users.”⁶²

The challenge for the next few years is to establish if the expected effects will actually occur.

4.2 Regulatory aspects

Also with respect to the Dutch provision – but also the new Regulation – the proof of the pudding is in the eating. Does and will these provisions work in practice? A thorough look at the texts already reveals a number of discussion topics. Some general remarks restricted to the major aspects:

Essentially, the net neutrality framework is focused on the providers of public electronic communications networks across which Internet access services are provided and on the providers of the Internet access services as such. They represent only two players in a wider and complex Internet value chain. For instance, it seems that apps – when offered as independent services – are not covered by the regulation, being over-the-top services (OTT), which are part of a different layer than telecommunications networks and services. It is important that it becomes clear who the addressees of the regulation are and next to establish if this would cause the purpose of the regulation to be met or not. Answering this question about the addressees is also relevant for a more in-depth analysis of the relevance and scope of non-discrimination.

The risk of overregulation or underregulation is also evident with respect to the aspect of throttling or blocking services and zero rating (price discrimination). After all, these are the two activities that represent the core of the regulation. In the Dutch context, a restrictive interpretation is suggested. This means that the threshold for intervention is low. On the other hand, favouring certain services does not automatically result in throttling or blocking Internet access or in market distortion.

⁶¹ Analysys Mason, *The role of government in the Internet*, Report for the Dutch Ministry of Economic Affairs, April 2013 (<http://www.analysismason.com/About-Us/Case-Study-Content/Government-role-Internet-case-study/Government-role-Internet-case-study/#.UjtaHmbCRaQ>).

⁶² SEO economic research, *The innovation-enhancing effects of network neutrality*, commissioned by the Ministry of Economic Affairs, June 2013 (http://www.seo.nl/uploads/media/2013-33_The_innovation-enhancing_effects_of_network_neutrality.pdf).

As far as congestion is concerned, whether there will be any intervention at all primarily depends on, or should depend on the question of whether or not congestion occurs. The congestion concept is a big elephant in the room. Can congestion be defined as something static, or is a more dynamic approach preferable? Should peak load be taken into account, or should there be dimensioning, which guarantees certain minimum levels? The case of Internet access in trains is a clear example in this respect.

Additional rules can be set, if necessary. This is in line with Article 22 of the European Universal Service Directive. But what do these 'quality of service' criteria need to focus on? On further information about the congestion concept, or is there also room for more extensive forms of regulation, including considerations of pluralism and must-carry as we know them from the CATV environment? Is the proposed guideline helpful or a great opportunity to ridicule net neutrality?

Part of the net neutrality issue is the application of DPI (see the WhatsApp case). From the perspective of solving the congestion problem and managing Internet traffic, DPI is a relevant technology. In the description of the incidents, the use of DPI – whether or not permitted – is explicitly dealt with. DPI is standing practice. The fact that the new regulation clearly shows that it is the end-user who is primarily in control concerning the application of DPI, fits in with the applicable frameworks with respect to privacy and communications freedom regulation. It is less clear if any permission revoked by the end-user for the use of DPI has consequences for the possibility to apply effective net neutrality regulation.⁶³

The zero-rating issue is at the middle of today's debate. First of all, more clarity is needed about how zero rating relates to the provisions of the Net Neutrality Regulation. Does the regulation represent some kind of maximum harmonisation excluding a total ban on zero rating or does the Dutch interpretation hold? Regarding the latter, it is interesting to observe the change in opinion. The original proposal for the implementation of the Regulation claims that zero rating cannot be prohibited, followed by a change of mind and a reintroduction of a total ban on zero rating/price discrimination. The arguments of the Dutch government do not seem convincing as most forms of zero rating are not about technical discrimination: all services are still equally accessible; no prioritisation of traffic takes place. In many cases, zero rating represents a common business practice: the bundling of services. Although bundling of services needs to work within a general or sector specific regimen on fair competition, it does not get banned as such. We allow multiple play offerings in telecommunications, audio-visual services are integrated in packages and combined with

⁶³ The WhatsApp case resulted in another amendment to the Dutch Telecommunications Act, which allows users to forbid or end DPI practices.

access, etc. Bundling/zero rating can provide new options to end-users and can result in a better match between offer and demand. As we know from other situations, bundling can also cause serious problems, including anti-competitive behaviour. A total ban would make it impossible to seek for an optimum in a quickly changing environment.

4.3 Analysis of the Dutch cases

The above implementation of net neutrality in the Netherlands and the case law based on it shows the complexity of the underlying regulation and how regulators deal with it.

To start with the latter, we observe hesitation at the level of the regulator to deal with net neutrality issues. Until now, the regulator has dealt with only a few cases and has not yet taken an active approach on the new Regulation. Nevertheless, the interventions did result in behavioural changes: operators stopped infringing activities (throttling traffic, limiting the use of DPI, ending zero-rating schemes).

In the T-Mobile case, many issues are left open. For example, the regulator assumed jurisdiction but does provide 'Internet access in a train', the offering of a public service that must meet the net neutrality requirements. Or is this mainly a private service offered by using (parts of) a public network? Can we compare the situation with offering 'Internet access in a hotel', in this case a moving hotel? In an earlier case, the Dutch regulator determined that in most instances offering Internet access in hotels must be considered a private service between the hotel and its guests. Without a public network/service involved, the rules simply do not apply. More interesting still, is the short-cut conclusion about congestion. T-Mobile uses its slow 2G/3G network on trains, saying that its new 4G network is too costly, because it requires expensive modifications on board the trains. Consequently, could one argue that the congestion is 'self-inflicted'? Is this a relevant circumstance? Are operators under an obligation to keep their infrastructure 'state of the art'? Finally, the measure taken by the operator is drastic: all peer-to-peer and streaming traffic is blocked. Is such a measure sufficiently proportional? What about trains with just a few passengers or with passengers who mainly use voice services, and what about areas with sufficient coverage?

In the KPN case, some readers might get an uncomfortable feeling. How is it possible that a free basic service, blocking VoIP, while a premium – paid – service is made available at the same time, is considered to be an infringement on net neutrality rules. The decision of the regulator in itself is consistent with the narrow interpretation of the rules, but is this still in line with the more normative

criteria as set out in Article 8 of the Framework Directive (consumer interests/competition/internal market)? Additionally, an easy remedy seems to be available: as with the T-Mobile case, would the case be different if the hotspots at Schiphol Amsterdam Airport were not exploited by KPN as a provider of public telecommunications services but by Schiphol itself as a private operator based on a wholesale contract with KPN.

The packaging of Internet access and (free) services (such as Internet access in combination with 'free' use of a services; see the Vodafone cases) shows that certain cosmetic solutions might be available to deal with a strict non-discrimination/zero-rating policy. As long as services are offered independently from the Internet access service, this is in compliance with the strict Dutch rules. A telco operator selling a mobile subscription and a separate Spotify subscription fits within the regulatory framework, but combining the two is not allowed. This may indicate that up to a certain level indirect cross-subsidisation within a holding structure could be permissible before it becomes a circumvention of the rules. The cases do not pertain to this situation, but they do raise the question of what kind of reasoning applies to third parties that buy wholesale broadband capacity (e.g. a Mobile Virtual Network Operator) and create a mix with certain services.

4.4 Final remarks

The introduction of more material or detailed provisions on net neutrality is an interesting development. It seems to be something brave to do, but some cracks become visible when we assess the Dutch example. Is it flexible enough to deal with a steep learning curve and a dynamic environment? A similar question can be asked about the new Net Neutrality Regulation, in particular when it would indeed allow for the Dutch interpretation to stand.

More importantly, are we addressing the right questions? Is the open Internet/net neutrality only about providing Internet access by network operators/service operators? In my view, at least an integral value chain approach is required. In such an approach, it will be impossible to restrict net neutrality to '*network* neutrality' exclusively; the other value chain elements will need to be considered as well. To achieve the right relationship between purpose and means it will need to be established which elements of the value chain affect the process of free exchange between the information provider and the information user. This is a matter far more complex than would be in line with a typical telecommunications approach where the accent is mainly on the provider of telecommunications networks and telecommunications services. The convergence between

telecommunications and communications regulation – in Europe these are for the greater part still two separated issues – cannot be ignored. At the same time, overregulation and underregulation include the risk that problems move to another part of the value chain. This is not unique for net neutrality, but it is a general question in the context of the fast developing information society.⁶⁴ For example, the issue of ‘find and be found’ is increasing rapidly. The fact that there is sufficient supply of content is not really important anymore, but rather how to create a link between supply and demand, between providers of information and consumers. If references to information are not included in selection systems and selection systems do not offer the end-user any free options/choices, information asymmetry will be the result. The significance of asymmetry or removing it is huge, as it is a crucial factor for controlling the ‘eyeballs’ and consequently for affecting choices and the transactions arising from these choices. ‘Find and be found’ is a key element in the European discussion on convergence and connected TV.⁶⁵

Finally, in a previous study, it was pointed out that the distribution of audio-visual services could become the major ‘net neutrality battlefield’.⁶⁶ Audio-visual services require substantial capacity and may cause real congestion. According to certain statistics, streaming video already represents most of the peak time traffic.⁶⁷ The various conflicts/negotiations in the US market show that the stakes are high. Similar developments can be expected in the European market, as the importance of streaming video is growing fast. To some extent, the challenges are not really new. Issues on Content Distribution Networks (CDNs) have similarities with old-fashioned interconnection issues in the POTS era (Plain Old Telephone Service).

It is all happening again.

⁶⁴ See: N.A.N.M. van Eijk, R.F. Fahy, H. van Til, P.A. Nooren, H.M. Stokking and H.F.B.F. Gelevert, *Digital Platforms: An analytical framework for identifying and evaluating policy options*, TNO report R11271, October 2015, available from <https://www.rijksoverheid.nl/documenten/rapporten/2015/11/09/digital-platforms-an-analytical-framework-for-identifying-and-evaluating-policy-options> (retrieved June 20, 2016).

⁶⁵ W. Schulz, N.A.N.M. van Eijk, ‘Study on the Future of European Audiovisual Regulation’, Final report of HERMES, Hamburg/Amsterdam, October 2015.

⁶⁶ P. Nooren, A. Leurdijk and N.A.N.M. van Eijk, Net neutrality and the value chain for video, info, 2012-6, pp. 45-58 (<http://www.emeraldinsight.com/journals.htm?articleid=17056608>); N.A.N.M. van Eijk, Net Neutrality and Audiovisual Services, IRIS Plus, 2011-5, pp. 7-19. (http://www.ivir.nl/publications/vaneijk/IRIS_Plus_2011_5.pdf)

⁶⁷ Sandvine, Global Internet Phenomena Report 1H 2013. (http://www.sandvine.com/downloads/documents/Phenomena_1H_2013/Sandvine_Global_Internet_Phenomena_Report_1H_2013.pdf)