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The proof of the pudding is in the eating:
Net neutrality in practice, the Dutch example

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Summary

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, the Dutch parliament decided to take a firmer position and introduced a quite 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. There is a limited group of exceptions to this rule. Hindering and slowing down Internet traffic is allowed 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 of unsolicited communication (spam) to end-users, provided that the end-users have given their prior consent for this to be done, and d) to implement a legislative provision or court order. Another very important net neutrality principle was based on incidents of blocked applications such as Skype and WhatsApp 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.

The newly proposed European rules on net neutrality (as part of the new regulatory package) have borrowed heavily from the Dutch example. However, are the Dutch rules a success?

The no-blocking/no-charging restriction had an immediate effect on the market, in particular on the mobile one. Originally, the mobile providers intended to block or to charge for specific services (Skype, WhatsApp), but they had to abandon the idea due to the new net neutrality rules. This led to a new subscription structure, with a substantially increased emphasis on data traffic. Data bundles are priced more specifically, and existing packages with unlimited data access have been replaced by packages with a specific size (data caps) and specific speeds. In fact, voice is no longer a dominant factor in the pricing models.

But how did these changes affect the consumer? The no-blocking/no-charging rule more or less killed traditional texting (SMS), but it is too early to tell whether net neutrality has had an effect on the overall costs for mobile broadband. There are some indications that the overall price levels and options in the Dutch market are (still) in line with the prices in other European countries.

The new neutrality rules had no effect on the fixed market. Internet service providers on cabled networks have no history of blocking traffic. Only one incident with the slow-down of traffic was reported but turned out to be a 'misunderstanding'. One should keep in mind that the Dutch fixed broadband market is very competitive with the incumbent operator offering high-speed DSL or fibre and the cable television network operators offering high-speed broadband via their coaxial networks. The Netherlands belongs to the top broadband countries in the world.

The regulator in charge – the Authority for Consumers and Markets – took a first decision on applying the new rules in a case where Internet access in trains was blocked for congestion reasons. In another case, a service similar to WhatsApp was inaccessible via wireless networks. In two cases, the Authority investigated the bundling of data packages with free services (i.e. a mobile subscription with 'free' access to Spotify). To deal with these cases, a new guideline has been drafted by the ministry involved. The consultation process on the guideline has recently ended.

The conclusion of the paper is that putting net neutrality into more material regulation is much more complicated than defining it in a more abstract sense. Putting the rules into practice is even more challenging. In our view, the Dutch example shows that if regulation is too detailed, the development of services might be hampered and might to some extent ridicule the true objectives of net neutrality. The focus should be on a dynamic and evolutionary approach, offering the opportunity to adapt interventions quickly, depending on the specifics of the case. In order to establish such a more flexible framework, the present provision needs to be amended.

The proof of the pudding is in the eating: net neutrality in practice?¹

Nico van Eijk²

1. Introduction of net neutrality in the Netherlands³

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.⁴ The second was the implementation of the amended European regulatory framework for the communication sector.⁵ 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.⁶

¹ This draft paper is based on earlier work presented at the 10th Annual International Conference of the Center for Law & Public Utilities College of Law/School of Law, Seoul National University, Honolulu, November 2013. It is a work in progress. The author welcomes critical remarks!

² Prof. Dr N.A.N.M. van Eijk is a professor of Media and Telecommunications Law at the Institute for Information Law (IViR, Faculty of Law, University of Amsterdam). See: <http://www.ivir.nl/staff/vaneijk.html>

³ 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.

⁴ Starting with the conceptualization 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).

⁵ 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: <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: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0037:0069:EN:PDF>

⁶ 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

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.⁷ 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.

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 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.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) 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)

⁷ *Aanhangsel Handelingen II* (Appendix Official Report), 2008/09, nrs 2765 and 2766.

⁸ UPC is owned by Liberty Global Group (<http://www.libertyglobal.com>).

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 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).

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 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

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 Framework Directive, Article 8.4g '...promoting the ability of end-users to access and distribute information or run applications and services of their choice'; 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.' For a consolidated version, see: <http://ec.europa.eu/digital-agenda/en/telecoms-rules>.

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

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>

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 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

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.

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.

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, of which Article 7.4a offers the core of the regulatory framework by defining net neutrality. The second part of the implementation regards the transparency principle. This can be found in Article 7.3 of the act.

1.3.1 Net neutrality

The provision reads as follows:

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;

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

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 article has a very extensive explanatory memorandum which can be found in Appendix 1. The following aspects of the article can be considered crucial:

- No distinction is being made between wireless and wired networks.
- 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.
- Charging based on services and applications is forbidden, without any exceptions.
- From the explanatory memorandum it is clear that the provisions only regulate the 'open Internet' rather than managed Internet services.

1.3.2 Transparency

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:

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 Reactions

²⁶ Article 3.5a of the ‘Besluit universele dienstverlening en eindgebruikersbelangen’ (Dutch Bulletin of Acts, Orders and Decrees. 2012, 236).

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.”²⁷ 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.

²⁷ http://ec.europa.eu/commission_2010-2014/kroes/en/blog/netneutrality.

2. Implementation

2.1. Role of the national regulatory authority

The concrete application of the regulation has been submitted to the ACM (the Authority for Consumers and Markets).²⁸ The ACM is also charged with supervising compliance and enforcement. To date, the ACM has not issued any further directives as to net neutrality. On its website, it only provides a summary of the current rules and refers to the possibility of reporting complaints.

It is still unclear if the supervisory authority will provide a more detailed explanation of the enforcement policy to be conducted. It has been suggested that the ACM prefers 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.²⁹

Whether the ACM actually prefers European rules to national rules has not been established yet, but it would be in line with the view of the Body of European Regulators for Electronic Communications (BEREC), which the ACM is part of. In several documents, BEREC has expressed its opinion on net neutrality and has pointed to the importance of a European approach.³⁰

In fact, the ACM is facing a first intervention by the government, explaining how the net neutrality regulation needs to be interpreted (see paragraph 2.3).

2.2 First cases

One of the most problematic parts of net neutrality concerns the enforcement of the regulation. Still very few cases have been documented. In this paragraph, we first give a description of five cases that the regulator dealt with after the Dutch debate on net neutrality started. The two first cases more or less led to the new regulation. The three other examples started after the rules were put in place.

²⁸ Starting April 2013, the ACM has replaced OPTA.

²⁹ http://www.ancom.org.ro/uploads/links_files/2012_Net_Neutrality_Remko_Bos.pdf.

³⁰ See: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/24-berec-publishes-net-neutrality-findings-_0.pdf.

Only one of these three has been documented directly by the regulator by means of a written decision. The other two are based on publicly available information in the media and on oral information from various sources.³¹

2.2.1 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 measures, and the practice was believed to be not structural.³² 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.³³ The answers by the minister mainly confirmed what was said in the letter of the regulator.

2.2.2 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). 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).³⁴ 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).³⁵ Simultaneously, it

³¹ We expect more documented information to be available by the time this paper is finished.

³² Letter to UPC dd 13 November 2009, ref: OPTA/ACNB/2009/203147.

³³ *Aanhangsel Handelingen II* (Appendix Official Report), 2009/10, nr 526.

³⁴ For everything on DPI, see Milton Mueller's DPI project: <http://dpi.ischool.syr.edu/Home.html>.

³⁵ Memo OPTA dd 30 June 2011, reference: OPTA/ACNB/2011/201469.

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 secrecy³⁶ or the applicable privacy rules,³⁷ 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.

The definitive investigation into DPI practices of mobile providers was completed in 2013.³⁸ 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.³⁹ 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.

2.2.3. Blocking services

In May 2013, app provider RingCredible filed a complaint about blocking practices by incumbent KPN and/or one or more of its MVNOs (Mobile Virtual Network Operators).⁴⁰ RingCredible offers a service similar to WhatsApp. According to what was reported in the media, the mobile operator(s) were believed to block traffic on their network via a certain port number (port 5060 used for the VoIP

³⁶ As guaranteed in the Dutch Constitution (Article 13) and in the Telecommunications Act (Article 18.13).

³⁷ As laid down in the Dutch Data Protection Act (*Wet Bescherming Persoonsgegevens*):

http://www.dutchdpa.nl/Pages/en_ind_wetten_wbp.aspx

³⁸ http://www.dutchdpa.nl/Pages/en_pb-20130704-analysis-mobile-data.aspx

³⁹ 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).

⁴⁰ <http://www.telecompaper.com/news/ringcredible-files-complaint-about-kpn-3g-network--940130>

protocol SIP). The ACM – quoted in a news report – confirmed the complaint and took action in order to ensure the app would work again as soon as possible. They also announced that they would further investigate the case in order to determine the cause and to avoid similar incidents in the future.⁴¹ According to KPN, the blockage was an unintended side effect of a technical adjustment to its 3G network.

2.2.4. Managing congestion

In a recent case (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).⁴² 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 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,⁴³ 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).

2.2.5 Bundling Internet access with services

Several mobile providers offered Internet access bundled with specific services. KPN had a combination with unlimited access to Spotify, and Vodafone had a product called Sizz, combining Internet access with unlimited access to a video streams from broadcaster RTL (aimed at the female

⁴¹ <http://webwereld.nl/netwerken/77953-kpn-blokkeert-voip-op-wifi-hotspots>.

⁴² Starting April 2014, the Dutch Railways have taken over the responsibility from T-Mobile.

⁴³ <https://www.acm.nl/nl/download/publicatie/?id=12508>

market).⁴⁴ The question arose whether this represents a form of discrimination that is not allowed by the net neutrality provision. Based on an investigation conducted by the regulator, Vodafone modified its offer by separating the Internet access service and free access to the video stream. The regulator, confirming that blocking or the prioritisation of traffic were not at stake, concluded that such a separation rendered the service compliant with the regulation.⁴⁵ A similar approach was chosen in the Spotify case. The regulator concluded that the Spotify service was offered as a separate and independent service on top of the subscription.⁴⁶

2.3 New governmental guideline

The bundling of Internet access with services, created confusion about the applicable rules. The explanatory memorandum to the net neutrality provision gives the following clarification:

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.⁴⁷ When this guideline takes effect, the regulator will have to act accordingly. Comments on the consultation are a mixed bag: on the one hand the interpretation is supported, on the other hand it is claimed that this interpretation was not intended by the drafters of the provision.

⁴⁴ <http://www.telecompaper.com/news/acm-looking-into-net-neutrality-at-vodafone-nl-t-mobile-nl--950079>

⁴⁵ <http://jaarverslag.acm.nl/book/export/html/79>

⁴⁶ <http://tweakers.net/nieuws/93502/hi-haalt-verbruik-spotify-app-niet-meer-van-databundel-af.html>

⁴⁷ <http://www.internetconsultatie.nl/netneutraliteit>. The consultation ended on 30 May.

2.4 Analysis of the cases and proposed guideline

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

To start with the latter, we observe a lot of hesitation at the level of the regulator. Until now, the regulator has refrained from giving guidance. Most of the cases did not result in public documents either and were dealt with through bilateral/secret negotiations. The first two cases arose before the new provision came into force and ended with a particular measure that was put in place. Both did result in behavioural changes: operators stopped infringing activities (throttling traffic, limiting the use of DPI).

In the T-Mobile case, many issues are left open. For example, the regulator assumed jurisdiction but does not 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?

The packaging of Internet access and (free) services (such as Internet access in combination with 'free' use of Spotify) revealed an interesting conflict between the regulator and the Dutch government. The regulator allows the combination for as long as both are separate services (for example, both bought as wholesale products and then offered to the end-user as a package). The interpretation of the Dutch government is much stricter and only allows for the combination of one service with Internet access (not offering the possibility of access to other services/use the Internet

access to search for other purposes). Even if such an interpretation would be in line with the text of the provision, the question remains to what extent this contributes to preventing or solving issues related to congestion or access to the 'open Internet'. And would such a definition not coincide with the definition of managed or specialised services that represent a different issue in the context of net neutrality?

Finally, we see the consequences of a regimen that addresses wireline and wireless in a non-discriminatory way. All of the described cases, with the exception of the first one, are mobile related. Is this because of the different technology (CATV operators only use a small part of their network for Internet(-related) services? Most of the capacity is used of services that are outside the scope of net neutrality (also known as the traditional dissemination of analogue/digital television channels)). Or is, for example, the behaviour of mobile market players different?

3. Market effects

The net neutrality provision had a direct impact on the strategy of market parties, especially with respect to mobile communication. Originally, the providers intended to charge for specific services, but they had to abandon the idea due to the new net neutrality rules. This led to a subscription structure, where the emphasis on data traffic has increased. Data bundles are priced more specifically, and existing packages with unlimited data access have been replaced by packages with a specific size (data caps) and specific speeds. The exact effect on the consumer price for mobile communication is not clear yet. Comparative studies are not yet available either. There are some indications that the overall price levels and options in the Dutch market are in line with the prices in other European countries.⁴⁸ A price strategy change was necessary at any rate, since there had been a decrease in revenue from classic services (calls and SMS) for some time, rendering the older business model obsolete.

Since the provisions on net neutrality took effect, no visible changes have occurred in Internet access provided via fixed networks. In the Netherlands, there is strong competition between Internet access via the existing telephone network (xDSL, 2-80Mb) and via cable television networks (DOCSIS, 50-200Mb). The available subscription types are primarily based on data speeds rather than on the amount of data. The providers do have 'fair use' restrictions in place, which is known to be applied in exceptional cases.

It should be noted that the Dutch Market already meets the goals as set out in the European Digital Agenda. These goals are that by 2020, 100% of the households should have access to 30Mbps broadband, and 50% to 100Mbps.⁴⁹ According to Dutch government figures, 95% of the Dutch population already has access to 100mb or more (mainly because of Internet offered by CATV networks and fibre).⁵⁰

⁴⁸ <http://www.rijksoverheid.nl/bestanden/documenten-en-publicaties/rapporten/2013/12/11/eu-benchmark-2013-nl-2/eu-benchmark-2013-nl-2.pdf>

⁴⁹ European Commission, IP/10/581, 19 May 2010.

⁵⁰ Parliamentary documents, 2013/14, 32637/24095, no. 97. Recent EU-figures confirm the high deployment of broadband in the Netherlands (European Commission, IP/14/609, 28 May 2014).

4. Next steps/developments

In this part of the paper, we describe three developments that have taken place since the framing of net neutrality in the European telco regulation and the implementation in the Dutch Telecommunications Act. First of all, we briefly discuss the fact that the Netherlands has extended the net neutrality principle into the broadcasting sector. Secondly, the European proposals to reform the net neutrality regulation are explored. Finally, the ‘Netflix effect’ is briefly mentioned.

4.1 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 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.⁵¹ The government has announced that it will withdraw the provisions.

Although must-carry rules were put in place⁵² 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.

⁵¹ Court of The Hague, 29 January 2014 (ECLI:NL:RBDHA:2014:1004).

⁵² Giving preferential access right to public broadcasting channels (national, regional and local).

In July 2013, a provision was launched via an amendment to the Dutch Media Act, which “makes it possible to prescribe a form of net neutrality on cable television networks.” 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.

4.2 Reform European net neutrality rules

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.⁵³ The proposal is less far-reaching than the Dutch regulation.

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

⁵³ 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.

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.⁵⁴ 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.

It is not yet clear whether the Council of ministers will agree with these amendments. Certain Member States have expressed concern about the detailed proposals and prefer a milder regimen.

4.3 The ‘Netflix effect’

In September 2013, Netflix started offering its services in the Netherlands (monthly subscription fee 7.99 euros at introduction, 8.99 euros today). Before the introduction, similar streaming services were not available in the Dutch market or could be considered insignificant with the exception of free catch-up TV services. The pickup rates for subscription television, video-on-demand/near-video-on-demand, have always been very low, and in general the Dutch market was regarded as highly conservative. This changed dramatically with the arrival of Netflix. Although no official figures are made available by Netflix, the number of subscribers is estimated to be at least 500,000 (March 2014). This represents a 10% market share in less than six months. Network providers have indicated that Netflix traffic represents 5-10% of their data traffic. Although the capacity use of Netflix is not drawing a lot of attention, the effect on the broadcasting/services market does, and Netflix is often considered to be disruptive. We may assume this eats into the (expected) revenue streams of the incumbent/CATV providers. Unconfirmed rumours claim that Netflix is talking to these providers in order to secure a high quality of its services (despite the net neutrality provision being in place).

⁵⁴ [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)

In its consultations on the proposed net neutrality guideline, the Dutch government has clarified that interconnection and peering are not covered by the net neutrality provision. This is in line with the opinions of various authors, who see interconnection and peering as issues that will become more and more important.

5. Analysis

In this section, the impact of net neutrality on the national policy is briefly discussed. Next, 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.

3.1 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.⁵⁵ The same happened with initiatives in the context of the ITU conference in Dubai.⁵⁶

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

⁵⁵ *Aanhangsel Handelingen II* (Appendix Official Report), 2012/13, nr 165.

⁵⁶ *Kamerstukken* (Parliamentary documents) II, 2012/13, 24095, nr 330.

which also plays a part in the current discussion on connected TV.⁵⁷ 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.”⁵⁸

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

3.2 Regulatory aspects – general

Also with respect to the legal aspects of the provision, the proof of the pudding is in the eating. Does the provision work in practice? A thorough look at the text and the explanation already reveals a number of discussion topics. Some general remarks restricted to the major aspects:

Essentially, Article 7.4a of the Telecommunications Act 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 Internet value chain. In the explanation, it is also stated for instance that apps would be covered by the regulation, but it may be argued that apps are rather associated with 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 the application of the non-discrimination provision (paragraph 1, sub a).

The risk of overregulation or underregulation is also evident with respect to the aspect of throttling or blocking services. After all, these are the two activities that represent the core of the regulation. In the explanatory memorandum, a restrictive interpretation is suggested. This could mean that the threshold for intervention is low. On the other hand, favouring certain services does not automatically result in throttling or blocking. This dilemma is clearly reflected in the proposed government guideline, that takes very restrictive approach.

⁵⁷ 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>).

⁵⁸ 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).

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.⁵⁹

3.4 Final remarks

The introduction of more material/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?

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

⁵⁹ The WhatsApp case resulted in another amendment to the Telecommunications Act, which allows user to forbid/end DPI-practices.

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 most 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.

In a previous study, it was pointed out that the distribution of audio-visual services could become the major ‘net neutrality battlefield’.⁶⁰ 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.⁶¹ 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 rapidly (see the Netflix example). 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).

In addition to technological issues, a growing number of issues becomes visible that has many similarities with questions that were asked (and are still being asked) about access to networks for the distribution of broadcast programmes. If a priority lane (‘managed traffic’) is allowed in the first place – a generally accepted principle in the current net neutrality debate – several questions will need to be answered: Who will have access to this priority lane? Under what conditions? What to do in the event of congestion in the priority lane? How to preserve a truly open Internet on the non-managed lane? The two KPN/Spotify and Vodafone/Sizz cases are first examples of how priority can be given to particular services.

Finally, 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

⁶⁰ 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)

⁶¹ Sandvine, Global Internet Phenomena Report 1H 2013. (http://www.sandvine.com/downloads/documents/Phenomena_1H_2013/Sandvine_Global_Internet_Phenomena_Report_1H_2013.pdf).

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.⁶²

⁶² See: EU green paper 'Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values', Brussels, 24/4/2013 COM(2013) 231 final, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0231:FIN:EN:PDF>) and the European Parliament report on connected TV by the Committee on Culture and Education, 10/6/2013, (2012/2300(INI)), <http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A7-2013-0212&language=EN>

Appendix 1: Explanatory memorandum net neutrality provision⁶³

End-users should be able to decide what content they want to send and receive, and which services, applications, hardware and software they want to use for such purposes (in accordance with paragraph 28 of Directive 2009/136/EC). The original Article 7.4a proposed by the Minister cannot adequately ensure this, because it allows providers to restrict access to websites or services. Internet Service Providers will increasingly take measures to hinder or slow down Internet traffic, either at their own initiative or under pressure from third parties, unless this is prohibited. This amendment is intended to replace Article 7.4a Telecommunications Act proposed by the Minister.

The amendment aims to maximise choice and freedom of expression on the Internet for end-users. The term 'Internet' refers to the global, worldwide network of endpoints with IP addresses assigned by the Internet Assigned Numbers Authority. It is not intended to prohibit the 'reservation' of bandwidth for IP-based services which are offered through its own network, including IP-based television that is not offered via the Internet: these are no services or applications on the Internet. The term 'Internet' should be interpreted broadly, however, to ensure that providers cannot circumvent the scope of this provision. The term 'provider of an Internet access service' refers to the term as used in the appendix under Article 13.2a of the Telecommunications Act.

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 is 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.

⁶³ Translation quoted from Bits of Freedom: <https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/>

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.

The amendment prohibits the hindering or slowing down of services or applications on the Internet. This means firstly that a provider may not hinder or slow down a service or application of a specific party. It also means that the provider may not hinder or slow down any specific service or application, such as Internet telephony. The amendment seeks inter alia to prevent the damage a user suffers by breach of the standards contained herein.

To avoid misunderstanding, applicants would like to emphasise that the providers under this article are allowed to provide separate services over the Internet. This allows the provider to offer a separate subscription for mobile VoIP calls instead of the regular cell phone (think for instance of a VoIP mobile phone subscription). Although this service is provided over the Internet, it is not a service intended to provide access to the Internet. Such a service is not an Internet access service as defined in this article, but a telephone service. In these cases, it is allowed to block the remaining Internet traffic (in the case of a VoIP-only subscription all traffic that is not used for VoIP).

Only in certain, limited cases as described in Article 7.4a, first paragraph sub a to d, an exception may be made to the principle that ISPs may not hinder or slow down traffic from end-users. Those exceptions must also be interpreted narrowly, whereby the assessment of the necessity must be based on criteria of proportionality and subsidiarity which are similar to criteria established in the context of the application of the European Convention on Human Rights.

The exception under a aims to ensure that in case of congestion, traffic which should be passed without delay (such as VoIP) can be passed quickly, and that in such a case other traffic may be delayed. Few measures will in the opinion of the petitioners be deemed necessary. The most effective method to combat the effects of congestion is indeed to avoid congestion. Providers can avoid congestion in the first place by adequate investment in capacity. However, if there is congestion, then the measures under this exemption are designed to encourage end-users to continue to have maximum access to information, disseminate information and use applications or services. Providers

may under this exception only take measures which are not discriminatory, so providers must treat the same or similar services equally. It is to be expected that a heavier service will be delayed first. The measures should be removed as soon as there is no congestion anymore.

The amendment does not seek to prevent the provider from applying necessary network management in order to ensure proper transfer and access. In addition, the provider in the case of congestion may prioritise proportionally the traffic of Internet subscribers with high bandwidth over the traffic of Internet subscribers with a lower bandwidth, in proportion to the difference in bandwidth between these subscriptions.

The exception under b is aimed at blocking traffic which affects the safety or integrity of the network or the terminal of the end-user (as discussed in the above-mentioned paragraph 28). Traffic which affects the safety or integrity of the network, can for example be traffic from computers that are part of a botnet and which is used for a distributed denial-of-service attack. Violations of the security or integrity of the terminal are for example traffic used by a hacker who, without authorisation of the user, views, copies or manipulates files on the PC. Again, a measure must be proportionate, so must be restricted to only the traffic that affects the security or integrity, and should no longer be in force if the traffic is not being transmitted anymore. The term 'integrity and security' should be interpreted narrowly and does not protect interests of third parties. The measures for the integrity and security of the service and network also include the blocking of outbound spam by the provider.

The exception under c is designed to make it possible to block unsolicited commercial communications such as spam.

The exception under d is designed to allow for the situation where providers are required by statute to hinder or slow down certain traffic, or are required to do so under a court order.

The second paragraph seeks to ensure that a measure which safeguards the integrity or security of a network or service is protected with sufficient procedural safeguards. Internet providers under this paragraph would for example only be allowed in limited cases, to block traffic from botnets within its

network, when they have informed an end-user from whose computer the traffic originates, an opportunity to take action to stop the transmission of the traffic. This is intended to prevent the undesirable situation where a company network is shut off from the Internet if a provider has determined that within this network there is a computer that is part of a botnet. The administrator of the company will then first have the opportunity to turn the infected computer off itself.

The third paragraph is intended to prevent Internet service providers to charge prices which result in restrictions of access to specific services or applications on the Internet. This still allows for the charging of different prices for different types of bandwidth. Under this paragraph, providers are prohibited from charging a higher price for Internet access where Internet telephony is used than for Internet access where it is not the case.

To avoid misunderstanding, the authors would like to emphasise that it is permissible to offer an Internet access service in conjunction with filtering software or technology, for 'parental controls' or filtered Internet for religious communities and schools. To prevent circumvention of the principle of net neutrality, the provision, quality or the rate of Internet access service may not depend on whether the filtering software or technology is used. The subscriber must be free to obtain the Internet access service without the filtering software.

Lastly, it remains possible to provide a mobile Internet access service to customers in the Netherlands alone, and not abroad. This may be attractive to a subscriber which would like to avoid data roaming costs abroad.

The fourth paragraph makes it possible to make further rules regarding the provisions in the first, second and third paragraphs. In the case of (at the time of establishment of this article as yet) unforeseen circumstances it may be necessary to clarify or specify the first to third paragraphs. For such legislation, only clarifications of the first to the third paragraphs may be arranged. This regulation at a lower level may not introduce additional exceptions to the principle of net neutrality. These rules must be filed beforehand at the parliament.

The fifth paragraph was proposed by the government to implement Article 7.4a.

Article VIb proposes a transition regimen for Article 7.4a. Article 7.4a as it is replaced after the effective date will apply to all contracts for an Internet access service. In the interest of legal certainty, and in order to give the providers a reasonable time to comply with this obligation, it is proposed that existing agreements are exempt from Article 7.4a. This transition is valid for one year after the effective date. The obligation to act in accordance with Article 7.4a is valid for all contracts to supply an Internet access service after the date of entry into force of section 7.4a and agreements concluded after that date (automatically) be extended or renewed. Of course, providers remain free to offer subscriptions before entry into force of section 7.4a which already comply with Article 7.4a in anticipation of the enactment.