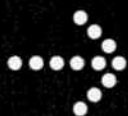


# COMMUNICATIONS & STRATEGIES

DigiWorld Economic Journal



## Internet & NGN: the future of interconnection

Edited by Yves GASSOT, J. Scott MARCUS  
& Winston J. MAXWELL

- IP-based NGNs and Interconnection: The Debate in Europe
- Is There a "Right" Charging Principle with the NGN Advent?
- The Growing Complexity of Internet Interconnection
- The FCC's Network Neutrality Ruling in the *Comcast Case*: Towards a Consensus with Europe?
- Guardian Knight or Hands Off: The European Response to Network Neutrality



Interviews with

**Cara SCHWARZ-SCHILLING**, Head of Internet Economics,  
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# COMMUNICATIONS & STRATEGIES

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# Guardian Knight or Hands Off: The European Response to Network Neutrality

## Legal considerations on the electronic communications reform

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**Abstract:** Network neutrality refers to a policy principle regarding access for online content and service providers to broadband infrastructures. It implies a general and ex ante obligation of non-discrimination for network operators when granting access to providers of online services, with the aim of excluding practices such as blocking access to non-affiliated content, degrading the quality of transmission, imposing unreasonable restrictions or prioritising affiliated content. Whether such obligation should be "cast in the Stone Tables" of the law was first fiercely debated in the United States, and the issue is now gaining increased attention in other parts of the world, including the European Union, where the regulatory framework for electronic communications is currently under review. This article examines whether existing rules already provide the relevant authorities with the necessary tools to take action against broadband providers illegitimately discriminating or blocking content of those who are not prepared to pay a "toll" for the use of higher speed networks or better quality services. It focuses in particular on the EU regulatory framework for electronic communications networks and services, including the reform proposals published by the European Commission on November 13<sup>th</sup> (type should be like 24<sup>th</sup> below) 2007 and the resolution adopted by the European Parliament on 24<sup>th</sup> September 2008.

**Key words:** network neutrality, regulation, electronic communications, reform proposals.

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From a legal or regulatory perspective, network neutrality refers to a policy principle regarding access for online content and service providers to broadband networks. It implies a general and *ex ante* obligation of non-discrimination for network operators<sup>1</sup> when granting access to Internet content providers<sup>2</sup> and users, with the aim of excluding practices such as blocking access to non-affiliated content, degrading the quality of transmission, imposing unreasonable restrictions or prioritising affiliated content. Whether such obligation should be "cast in the Stone Tables" of the law (REDING, 2008) was first fiercely debated in the United States (US). There it was opposed (and is still opposed) by fierce defenders of "Internet freedoms" (including the right to access Internet content, run applications and connect devices without undue restrictions by network operators, as well as equal treatment of all bits and bytes), and also by those who claim that the Internet has never been neutral and that innovation and new online services require traffic management techniques. The issue is now gaining increased attention in other parts of the world, especially the European Union (EU), where the regulatory framework for electronic communications<sup>3</sup> (the 2003 Regulatory Framework) is currently under review. In the context of this review, the discussion on network neutrality shifts the attention of the electronic communications industry from dealing with former network monopolies to the possible tension between network operators and Internet content providers.

This article analyses the major network neutrality problems in the light of the current and future EU sector regulation for the electronic communications sector. In the section following this Introduction, we present the core debate on network neutrality. In the subsequent section, we analyse the applicability of the 2003 Regulatory Framework. In the next section, we focus on the reform proposals of the European Commission (the Commission) of November 2007 and on the amendments adopted by the European Parliament (the Parliament) on 24<sup>th</sup> September 2008.<sup>4</sup> Finally, we provide conclusions.

<sup>1</sup> "Network operators" refer to operators that provide Internet access and data transmission services to their customers including both Internet end-users and Internet content providers.

<sup>2</sup> "Internet content providers" refer to operators providing content, applications, services, *et cetera*, based on the platform of the Internet, to Internet end-users. e.g. Google, Yahoo!, YouTube, *etc.*

<sup>3</sup> See all the legal instruments within the 2003 Regulatory Framework at: [http://ec.europa.eu/information\\_society/policy/ecomn/current/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomn/current/index_en.htm).

<sup>4</sup> All the documents related to the reform of the electronic communications regulatory package can be found at: [http://ec.europa.eu/prelex/detail\\_dossier\\_real.cfm?CL=en&DossierId=196418](http://ec.europa.eu/prelex/detail_dossier_real.cfm?CL=en&DossierId=196418).

We argue that many aspects of network neutrality are beyond the scope of the current 2003 Regulatory Framework, but that the reform proposals (in particular the amendments suggested by Parliament) are a step into the right direction. A detailed analysis of the application of EU competition rules to problems in the area of the network neutrality falls outside the scope of this article, but we can refer the reader to earlier papers on this topic (in particular CHIRICO, VAN DER HAAR & LAROUCHE, 2007; VALCKE, HOU, STEVENS & KOSTA, 2008).

## ■ Network neutrality: debate and arguments

The emerging concern about network neutrality is triggered by technological changes. The current Internet is designed based on the so-called "end-to-end principle" (SALTZER, REED & CLARK, 1984), which allows all data flows to be transmitted without any form of priority. Although this mechanism deals well with delay-insensitive applications, e.g. Email and web browsing, it does not sufficiently support rising delay-sensitive applications, such as Voice over Internet Protocol (VoIP), streaming video, online video gaming, etc, which demand guaranteed performance of data transmission to a certain level, i.e. quality of service. In order to meet this demand, engineers developed during the last decade "traffic prioritisation" techniques (also known as "traffic shaping" or "access-tiering") (OECD, 2007). This gives network operators extensive flexibility (exceeding the extent to which they managed traffic congestion with certain prioritisation techniques in the past) in determining the way that data packets and traffic are sent or received on a given network to the extent to which quality of service can be secured. However, while this new technology can meet the demand of delay-sensitive applications, it can also potentially allow network operators to treat data flows from different Internet content providers in a discriminatory way.

Although network neutrality has been described in many ways that emphasise different goals, at the heart of the debate lies the question of whether or not the Internet should be open, neutral and accessible to all on equal conditions (WU, 2003). Are "all bits created equal" and should the law therefore ensure equal treatment of all Internet users (as a "Guardian Knight that will allow the proverbial '2 guys in a garage' to be able to amaze the world with the next big thing" – as Commissioner Reding recently phrased it

in her speech in Copenhagen)? Or does openness for innovation necessarily imply legitimate network management practices (recognising that – quoting Commissioner Reding in the same speech – “for instance, traffic prioritisation can sometimes be an important driver of value and growth for operators”). A large part of the network neutrality debate focuses on network operators that, based on their market power, discriminate against particular Internet content providers or certain types of legitimate <sup>5</sup> data flow (PEHA, LEHR & WILKIE, 2007). This is especially the case with network operators who are vertically integrated or have alliances with content providers because these network operators are considered to have enhanced incentives to require other content providers (who may also be consumers) to pay a “toll” to use the higher speed networks that they in turn offer to end-users (MARSDEN, 2007).

In order to better identify possible problems flowing from absence of an adequate network neutrality policy, we first turn to the US legislative proposals. By late 2005, network neutrality regulations were included in several US Congressional draft bills, as a part of ongoing proposals to reform the US *Telecommunications Act of 1996*. Until present, there have been seven attempts to regulate network neutrality in the US. However, the first five attempts failed and only the last two bills, the *Internet Freedom and Preservation Act* <sup>6</sup> and the *Internet Freedom Preservation Act of 2008*, <sup>7</sup> are currently still under review by the relevant US legislative bodies. These two US drafts focus in particular on the following discriminatory practices by network operators:

- the *blocking* of the ability of particular Internet content providers to use broadband services;
- the *degrading* of the ability of particular Internet content providers to use broadband services;
- the imposing of *unreasonable restrictions* with regard to attaching certain devices or as to which applications that may be used on the networks of network operators; and

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<sup>5</sup> Illegal data flow, violating, for example, human rights, copyrights, *of cetera*, is not an issue related to network neutrality.

<sup>6</sup> The full text of the *Internet Freedom and Preservation Act* is available at: <http://www.publicknowledge.org/pdfs/215-110-20070109.pdf>

<sup>7</sup> The full text of the *Internet Freedom and Preservation Act of 2008* is available at: <http://www.opencongress.org/bill/110-h5353/show>

- the providing of *prioritisation* only to particular Internet content providers.<sup>8</sup>

Furthermore, contrary to what some literature alleges (e.g. SURA, 2006), we are of the opinion that network neutrality is not "a solution in search of a problem". A number of practical incidents or cases in the information and communications sector both in the US and in Europe confirm this point of view. For example, in the *Madison River* case, a US telephone company blocked the ability of its digital subscriber line (DSL) customers to use VoIP services.<sup>9</sup> Later, in the conflict that involved *Comcast Corporation*, a US network operator was sued for preventing bitTorrent users from seeding files.<sup>10</sup> In Europe, some network operators have reportedly blocked VoIP and peer-to-peer systems (GEIST, 2005). Similarly, the removal by some UK mobile operators of VoIP functionality from *Nokia N95* handsets in 2007 also triggered network neutrality concerns (TRUPHONE, 2007). Prioritisation, which implies a higher level of traffic shaping than blockage or degradation,<sup>11</sup> has not yet been fully installed by network operators. Nevertheless, PlusNet, a UK-based network operator, has already started selling prioritised services based on different types of Internet applications.<sup>12</sup> Last but not least, several network operators have also expressed their intention to discriminate against some Internet content providers (Save the Internet, 2008).

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<sup>8</sup> The *Internet Freedom and Preservation Act* requires that prioritisation should be provided free of charge. However, there is no consensus even among network neutrality proponents whether this should actually be the case. Therefore, the issue related to prioritization pricing is beyond the scope of this paper.

<sup>9</sup> See *Madison River Communications, L.L.C. and Affiliated Companies*, Order, File No. EB-05-IH-0110, 20 F.C.C.R. 4295 (Enforcement Bureau, 2005).

<sup>10</sup> See Federal Communications Decision of USA, Memorandum Opinion and Order, File No. EB-08-IH-1518, adopted: August 1, 2008 and released: August 20, 2008, available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-08-183A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A1.doc).

<sup>11</sup> From a technical point of view, it is more difficult to prioritise a particular data flow than to delay or to block it. (OECD, 2007)

<sup>12</sup> See PlusNet's policy on its prioritised broadband at: [http://www.plus.net/support/broadband/quality\\_broadband/](http://www.plus.net/support/broadband/quality_broadband/).

## ■ The 2003 Regulatory Framework vs. network neutrality issues

In this part, we examine the effectiveness of the 2003 Regulatory Framework to address the aforementioned network neutrality problems. The European regulatory framework, comprised of a set of directives, was adopted in 2002 and came into force in 2003. With regard to the restrictions on market behaviours of broadband network operators, there are three mechanisms provided by the 2003 Regulatory Framework that may be of relevance for network neutrality problems: the significant market power (SMP) regime, the general principles on access to electronic communications networks and services and consumer protection issues. However, before analysing these provisions in detail, it is important to present the general scope of application of the 2003 Regulatory Framework.

### **Electronic communications services *versus* Internet content**

The 2003 Regulatory Framework only applies to electronic communications networks and services. In Article 2(c) of the Framework Directive, an electronic communications service is defined as:

"a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting, but exclude services providing, or exercising editorial control over, content transmitted using electronic communications networks and services; it does not include information society services, as defined in Article 1 of Directive 98/34/EC, which do not consist wholly or mainly in the conveyance of signals on electronic communications networks".<sup>13</sup>

Hence, electronic communications services in the context of the 2003 Regulatory Framework apparently include neither broadcasting services, nor non-linear audiovisual media services, nor online services that provide content or information services or applications over the Internet. Since these "do not consist wholly or mainly in the conveyance of signals", such information society services are not covered by the definition of electronic

<sup>13</sup> See Article 2(c) of Directive 2002/21/EC of the European Parliament and of the Council of March 7, 2002 on a common Regulatory Framework for electronic communications networks and services. [2002] O.J. L 108/33 (Framework Directive).



communications services. This undoubtedly contrasts strongly with the fact that network neutrality potentially concerns all the data flows transmitted over the Internet, or particularly data flows generated by (independent) content or information providers.

The fact that these market players fall out of the scope of the 2003 Regulatory Framework has a number of practical consequences. Article 20 of the Framework Directive grants national regulatory authorities (the NRAs) the power to resolve disputes between undertakings. However, it limits this dispute resolution mechanism only to disputes "between undertakings providing electronic communications networks and services".<sup>14</sup> Hence, disputes between network operators and Internet content providers that are not considered undertakings providing electronic communications networks and services in the context of the 2003 Regulatory Framework are not in the scope of this provision. Therefore, regulators cannot in principle resolve disputes involving Internet content providers.

At this stage, it is clear that - because of its limited scope - the 2003 Regulatory Framework will not be able to resolve *all* network neutrality problems. In particular, problems with regard to providers of "services providing, or exercising editorial control over, content" and "information society services" might encounter significant problems in seeing their access rights enforced.

In the following three sections, we examine the applicability of the 2003 Regulatory Framework to the aforementioned network neutrality problems, excluding those related to services providing, or exercising editorial control over, content transmitted using electronic communications networks and services, or information society services.

### The SMP regime

The most important regulatory instrument under the 2003 Regulatory Framework lies in the so-called SMP regime. According to this regime, in order to regulate network operators, the NRAs should define relevant markets for particular electronic communications networks or services. After defining a relevant market, NRAs must conduct a market analysis to find out whether there is one or more undertakings that enjoy(s) SMP. The concept

<sup>14</sup> *Ibid.* Article 20

of SMP is equivalent to the notion of "dominance" under Article 82 of the EC Treaty<sup>15</sup>. In cases where no undertaking is found to have SMP, sector specific obligations should be rolled back on the market concerned. On the contrary, if the NRAs designate one or more SMP operators on the relevant market, they have to impose at least one obligation on that (those) undertaking(s). NRAs can choose from a range of remedies listed in the Access Directive and including transparency, non-discrimination, accounting separation, obligatory access, and price control.<sup>16</sup>

Important to note however is that the NRAs have to take into utmost account the list of (now) seven relevant markets, as identified by the European Commission in its recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (the Recommendation).<sup>17</sup> It is consequently crucial to examine whether the relevant market(s) for network neutrality problems is (are) included in the list of the recommended markets.

First, we should investigate which precise markets are involved in the problems that we described earlier in relation to network neutrality. In the current landscape, not many Internet content providers build their own

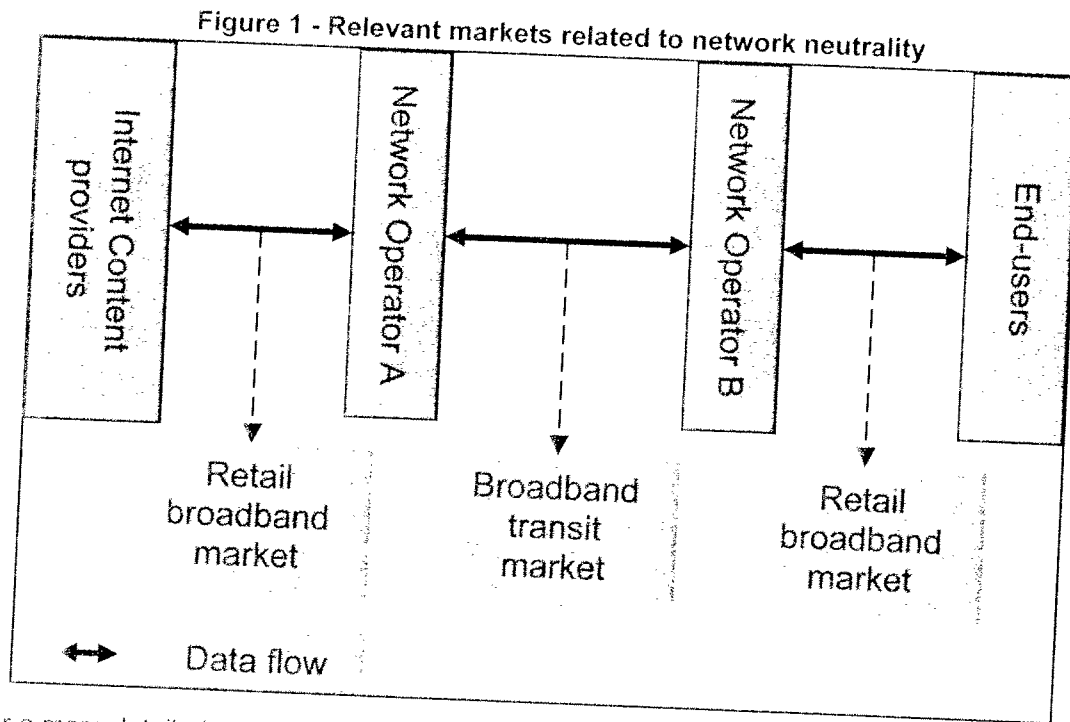
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<sup>15</sup> *Ibid.* Article 14.

<sup>16</sup> See Articles 9-13 of Directive 2002/19/EC of the European Parliament and of the Council of March 7, 2002 on access to, and interconnection of, electronic communications networks and services, [2002] O.J. L 108/7 (Access Directive). It should be noted that within the Commission's proposals for amending the Access Directive, NRAs could also impose a new obligation of functional separation. See Article 13a, the Commission Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2002/21/EC on a common Regulatory Framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and services, and 2002/20/EC on the authorisation of electronic communications networks and services (hereinafter "the Better Regulation proposal"), available at: [http://ec.europa.eu/information\\_society/policy/eucomm/doc/library/proposals/007com\\_2007\\_0097\\_en.pdf](http://ec.europa.eu/information_society/policy/eucomm/doc/library/proposals/007com_2007_0097_en.pdf)

<sup>17</sup> See COMMISSION RECOMMENDATION of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common Regulatory Framework for electronic communications networks and services, 2007/879/EC, 28.12.2007, O.J. L 344/65 (hereinafter: the 2007 Recommendation). This is the second edition of the European Commission recommendation on relevant product and service markets. The first edition dated from 2003 and listed 18 markets as susceptible to *ex ante* regulation (COMMISSION RECOMMENDATION of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common Regulatory Framework for electronic communication networks and services, 2003/311/EC, 8.5.2003, O.J. L 114/45).

networks to provide services to end-users.<sup>18</sup> Network operators usually act as intermediaries, taking care of broadband access and data transmission between Internet content providers and end-users. Furthermore, if Internet content providers and end-users are not within a same broadband network, a wholesale broadband transit service between different network operators is also necessary. Moreover, since network operators and Internet content providers operate at different levels of the value chain, the markets for deals between network operators and their customers (i.e. Internet content providers and end-users) are in general retail markets. Consequently, there are four groups of parties and two types of markets involved in the entire transaction, as described by figure 1.



For a more detailed scheme, see: CHIRICO, VAN DER HAAR & LAROUCHE, 2007, at p.18)

Subsequently, we should analyse whether the markets where network (on my computer the diagram covers the text) neutrality problems may arise fall into the list of the relevant markets recommended by the Commission. As shown in Figure 1, the major network neutrality problems concern discrimination by network operators against Internet content providers and

<sup>18</sup> Google built a wireless broadband network in San Francisco in 2003. Network neutrality opponents consider this as evidence that discrimination of network operators can incentivise Internet content providers entering markets for Internet infrastructures, thereby promoting consumer welfare. However, Google clearly announced that it had no intention to enter the infrastructure market

end-users are present in retail broadband markets. However, retail broadband markets are not listed as recommended markets susceptible to *ex ante* regulation within the Recommendation, thereby making the NRAs unable to deal with network neutrality problems based on the SMP regime.

The Recommendation provides an opportunity for the NRAs to define markets beyond the Commission's recommendation.<sup>19</sup> The high burden of proof related to this deviation nevertheless deters the NRAs from analysing additional markets (so far, no NRA has defined and/or analysed retail broadband markets).

Let's assume that an NRA would define and analyse retail broadband markets, could it then impose effective regulatory remedies to solve network neutrality problems? The regulatory remedies available to the NRAs are transparency, non-discrimination, accounting separation, mandatory access and/or price control. All these remedies, however, aim at enabling alternative operators to obtain "interconnection and/or access".<sup>20</sup> In the current Access Directive, access is defined as "the making available of facilities and/or services, to another undertaking [...] for the purpose of providing electronic communications services"<sup>21</sup> while interconnection refers to interconnection to "the physical and logical linking of public communications networks" between network operators.<sup>22</sup> Apparently, all these regulatory remedies are confined to regulating the relationship between network operators, or in other words electronic communications networks or services providers, and cannot extend to the services provided to customers that in this case are Internet content providers and end-users. Therefore, some NRAs – like the French ARCEP – are of the opinion that it is "basically regulating disputes between operators for 'access' or 'interconnection' issues" and has "no competences to regulate content service providers or disputes between content providers and operators" (GAUTHEY, 2007).

In summary, the SMP regime is not well adapted to cover network neutrality problems because (1) no retail broadband markets were ever included into *ex ante* regulation and (2) even if an NRA manages to include a retail broadband market into markets susceptible to *ex ante* regulation, the regulatory tools still limit their ability to deal with network neutrality problems.

<sup>19</sup> See Article 2 of the 2007 Recommendation, *supra* note 17.

<sup>20</sup> See Article 9-13 the Access Directive *supra* note 16.

<sup>21</sup> *Ibid.*, Article 2(a).

<sup>22</sup> *Ibid.*, Article 2(b).

### The Article 5 regime

The second instrument can be found in Article 5 of the Access Directive<sup>23</sup>, which provides the NRAs with the possibility to, in predefined circumstances, regulate network operators *regardless* of the existence of SMP. According to this provision, NRAs are able to impose:

- to the extent that is necessary to ensure end-to-end connectivity, obligations on undertakings that control access to end-users, including in justified cases, the obligation to interconnect their networks where this is not already the case and
- to the extent that is necessary to ensure accessibility for end-users to digital radio and television broadcasting services specified by the Member State, obligations on operators to provide access to the other facilities on fair, reasonable and non-discriminatory terms.

It should be noted that this provision — in contrast to the SMP regime, which is tightly monitored by the European Commission — grants NRAs a greater flexibility to handle national circumstances, and leaves them a considerable margin of discretion in dealing with issues of access and interconnection.

The application of the Article 5 regime is however also constrained by the definition of access and interconnection in the same way as the SMP regime. The only difference between the two regimes is that the existence of SMP is not required when imposing obligations under the Article 5 regime. Since access and interconnection are not relevant to retail broadband services provided to Internet content providers and end-users, the Article 5 regime cannot easily be applied to solve network neutrality problems either.

### Consumer protection provisions

The provisions on consumer protection and universal service are a third possible regulatory instrument. They require certain types of electronic communications services to be available for all end-users at an affordable price (universal service obligations, or "USO") and a certain degree of transparency concerning contracts of provision of electronic communications

<sup>23</sup> *Ibid.*, Article 5

services.<sup>24</sup> However, at present broadband Internet access (with specified characteristics in terms of quality and price) is not included in the list of EU universal service obligations.<sup>25</sup> Almost all other provisions in the area of consumer protection (such as contractual and transparency obligations) only relate to public telephony, rather than broadband Internet. Therefore, the current provisions on universal service and consumer protection are also not of help in resolving problems related to network neutrality.

Summarizing, in this section we demonstrated that the three most important instruments from the current EU Regulatory Framework (i.e. SMP, general access obligations and consumer protection provisions) are not sufficiently apt to deal with network neutrality problems involving Internet content providers and/or end-users, mainly because of the limited scope of application of the framework.<sup>26</sup> The subsequent section will examine whether the electronic communications reform proposals are likely to bring a breakthrough.

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<sup>24</sup> See Directive 2002/22/EC of the European Parliament and of the Council of March 7, 2002 on universal service and users' rights relating to electronic communications networks and services, [2002] O.J. L108/51 (Universal Service Directive).

<sup>25</sup> See, The Commission adopted Communication on the second periodic review of the scope of universal service in electronic communications in accordance with Article 15 of Directive 2002/22/EC. It also provides some broad reflections on the role of universal service in meeting wider challenges at European level - in particular ensuring access to broadband - in order to open a debate about possible future policy. COM(2008) 572 final, 25 September 2008, p 8.

<sup>26</sup> It should be noted, though, that some commentators disagree, stressing that there is a difference between the addressees of the obligations under the 2003 Regulatory Framework (which should be electronic communications networks or services providers) and the beneficiaries (which could be content providers). There are indeed elements in the Regulatory Framework pointing to this conclusion, like the rules on conditional access systems in Article 6 of the Access Directive (which benefit broadcasters) or the inclusion of market 18 (market for broadcasting transmission) in the first Recommendation on Relevant Markets. Since the application of the framework to the benefit of content providers is at least open for interpretation we decided to take a prudent position in this paper, defending the viewpoint that the framework cannot be used to deal with discrimination of Internet content providers by network operators in the context of the network neutrality debate.

## ■ Electronic communications reform proposals

### Background

The 2003 Regulatory Framework is currently subject to revision by the European legislator. On 13 November 2007, the Commission put forward its proposals to enhance the 2003 Regulatory Framework.<sup>27</sup> A first draft directive<sup>28</sup> (commonly called the "Better Regulation proposal") proposes amendments to the Framework, Access and Authorisation Directives. A second one<sup>29</sup> (the "Citizens Rights proposal") contains amendments to the Universal Service and e-Privacy Directives. It is mainly in the latter that the Commission articulated its position on network neutrality.

Following the so-called co-decision procedure based on Article 251 of the EC Treaty, the Commission's legislative proposals have to be approved by the Council of the European Union (the Council) and the Parliament. After receiving the Commission proposals, the Council and the Parliament held several hearings involving interested parties from different backgrounds. On 24<sup>th</sup> September 2008, the Parliament adopted in first reading a legislative resolution<sup>30</sup> approving, with amendments, the draft directives. The Council's common position is expected for mid-November 2008; however, chances

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<sup>27</sup> More details can be found at:

[http://ec.europa.eu/prelex/detail\\_dossier\\_real.cfm?CL=en&DossierId=196418](http://ec.europa.eu/prelex/detail_dossier_real.cfm?CL=en&DossierId=196418).

<sup>28</sup> See the Better Regulation proposal, *supra* note 16.

<sup>29</sup> See the Commission Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on consumer protection cooperation (the proposed Universal Service Directive), 2007 (hereinafter "the Citizens Rights proposal"), available at: [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/proposals/698/com\\_2007\\_0698\\_en.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/698/com_2007_0698_en.pdf).

<sup>30</sup> See, European Parliament legislative resolution of 24 September 2008 on the proposal for a directive of the European Parliament and of the Council amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on consumer protection cooperation (COM(2007)0698 - C6-0420/2007 - 2007/0248(COD)). Wednesday, 24 September 2008 - Brussels (hereinafter: the Resolution), available at: <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P6-TA-2008-0452>.

are high that Parliament will need a second reading before the directives will be finally adopted.<sup>31</sup>

The issue of network neutrality and "open networks" led the Commission and Parliament to suggest several amendments to the Universal Service Directive. The following sections will evaluate the effectiveness of these specific proposals to solve the network neutrality problems on which we focus in this article: blockage, degradation, restrictions on applications and terminal equipments and prioritisation. But before, we would like to draw attention to amendments of a more general nature, which may have an impact on the net neutrality debate.

A first issue is the possible extension of the framework to deal with conflicts between electronic communications networks and services providers on the one hand and content or information service providers on the other hand. To that end, the Commission proposed to broaden the notion of access (defined in Article 2 Access Directive) so as to include:

"the making available of facilities and/or services to another undertaking, under defined conditions, on either an exclusive or non-exclusive basis, for the purpose of providing electronic communications services, or *delivering information society services or broadcast content services*" (Emphasis added)

and extend the dispute resolution powers of NRAs (Article 20 Framework Directive) to:

"dispute[s] between service providers [...] where one of the parties is an undertaking providing electronic communications networks or services" (Emphasis added).

The European Parliament endorsed the latter, but reformulated the first to the cryptic phrase "access means the making available of facilities and/or services to another undertaking, under defined conditions, on either an exclusive or non-exclusive basis, for the purpose of providing electronic communications services, *including the delivery of information society services or broadcast content services*" (Emphasis added) – cryptic because the definition of electronic communications services explicitly excludes "services providing, or exercising editorial control over, content" (*supra*).

<sup>31</sup> At the time of writing of this paper, the 4<sup>th</sup> of May 2009 is mentioned as indicative date for the second reading in Parliament's plenary sitting.  
<http://www.europarl.europa.eu/oeil/file.jsp?id=5563972>



The second category of amendments we would like to bring to the forefront before turning to the proposals specifically tailored to the network neutrality debate, are those clarifying the policy objectives for NRAs in Article 8 Framework Directive. The Commission's proposals – as amended by Parliament – would lead to the specification that NRAs have to promote competition by inter alia:

"(b) ensuring that there is no distortion or restriction of competition in the electronic communications sector, *in particular for the delivery of and access to content and services across all networks*" (Emphasis added)

and promote citizens' interests by inter alia:

"(g) *applying the principle that end-users should be able to access and distribute any lawful content and use any lawful applications and/or services of their choice and for this purpose contributing to the promotion of lawful content in accordance with Article 33 of Directive 2002/22/EC (Universal Service Directive)*" (Emphasis added).

## Blockage

Blockage refers to the case where network operators refuse to carry data from particular Internet content providers. In its Impact Assessment the Commission explained that blockage should not be a concern for two reasons. First, where there is genuine competition, blocked consumers can in principle switch to other broadband providers. Second, if there is no effective competition, "the national regulator can under the EU framework impose *ex ante* access obligations on the dominant operators so that alternative market players are given a chance to provide their own broadband access services".<sup>32</sup>

Furthermore, even if high switching costs prevent affected consumers from finding alternative operators, Article 82 of the EC Treaty, in particular

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<sup>32</sup> See the European Commission Staff Working Document, Impact Assessment – Accompanying document to the Commission proposal for a Directive of the European Parliament and the Council amending European Parliament and Council Directives 2002/19/EC, 2002/20/EC and 2002/21/EC; Commission proposal for a Directive of the European Parliament and the Council amending European Parliament and Council Directives 2002/22/EC and 2002/58/EC, Commission proposal for a Regulation of the European Parliament and the Council establishing the European Electronic Communications Markets Authority, SEC(2007)1472 (hereinafter "Impact Assessment"), 2007, p 92, available at: [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/proposals/ia\\_en.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/ia_en.pdf)

the "essential facilities doctrine", should possibly oblige dominant network operators to start or resume the broadband services concerned, provided that certain conditions are fulfilled (VALCKE, HOU, STEVENS & KOSTA, 2008).

Nevertheless, it can be noted that the Commission suggested the inclusion of a new Article 28.1 in the Universal Service Directive, stating that:

"Member States shall ensure that NRAs take all necessary steps to ensure that: (a) end-users are able to access and use services, including information society services, provided within the Community..."

The European Parliament, however, considered this provision to run contrary to the principle that, in a competitive environment, operators should be able to restrict access as long as it is disclosed (Harbour Report, p. 67). It has deleted the text (Amendment 96) and considers its amendment to Article 22.3 (enabling NRAs to take action also in cases where there is competition but access is unreasonably restricted, *infra*) a more appropriate solution (note, however, that the policy objectives for NRAs in the new Article 8 Framework Directive will still reflect the principle that end-users should be able to access and distribute any lawful content and use any lawful applications and/or services of their choice, *supra*).

## Degradation

Similar to blockage, network operators may also intentionally degrade data flows from Internet content providers, either to exclude them out of the market or to reserve part of their capacities to prioritised services. Degrading data transmission capabilities of unaffiliated Internet content providers by a dominant network operator, is without any doubt not allowed under the current EU rules.<sup>33</sup> However, a remaining problem is that

"The current Regulatory Framework does not provide NRAs with the means to intervene were the quality of service for transmission in an IP-based communications environment to be degraded to unacceptably low levels, thereby frustrating the delivery of services from third parties."<sup>34</sup>

<sup>33</sup> *Ibid.*, p. 91

<sup>34</sup> *Ibid.*, p. 92

Therefore, the Commission proposed to introduce so-called "minimum quality of services requirements" in Article 22.3 of the Universal Service Directive:

"In order to prevent degradation of service and slowing of traffic over networks, the Commission may, having consulted the Authority, adopt technical implementing measures concerning minimum quality of service requirements to be set by the national regulatory authority on undertakings providing public communications networks. These measures designed to amend non-essential elements of this Directive by supplementing it shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 37(2). On imperative grounds of urgency, the Commission may use the urgency procedure referred to in Article 37(3)."<sup>35</sup>

The Parliament agrees with the core of this proposal, but proposes two changes. First, the scope of application of minimum quality of service requirements is considerably extended, not only to prevent "degradation of service and slowing of traffic over networks", but also to ensure "the ability of users to access or distribute content or to run applications and services of their choice is not unreasonably restricted". Second, Parliament prefers the NRAs to take the initiative to "issue guidelines setting minimum quality of service requirements, and, if appropriate, take other measures". Only in a second stage could the Commission adopt technical implementing measures "if it considers that the guidelines or measures may create a barrier to the internal market".<sup>36</sup>

The proposal of minimum quality of service requirements, once adopted, should be sufficient to keep network operators, wishing to reserve capacities in order to provide prioritised access, from degrading their customer to unacceptably low levels.

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<sup>35</sup> See the Citizens Rights proposal, p26. *supra* note 29.

<sup>36</sup> See, European Parliament legislative resolution of 24 September 2008 on the proposal for a directive of the European Parliament and of the Council amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on consumer protection cooperation (COM(2007)0698 - C6-0420/2007 - 2007/0248(COD)), Wednesday, 24 September 2008 - Brussels, (hereinafter: the Parliament Resolution) Amendment 193 [s/k], available at: [http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P6-TA-2008\\_0452](http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P6-TA-2008_0452)

### Unreasonable restrictions on running applications or using equipments

Network operators might restrict their customers' ability (1) to run specific Internet applications, such as peer-to-peer file sharing networks (as what took place in the US *Comcast* case<sup>37</sup>), and/or (2) to use some terminal equipment, e.g. game consoles, for the purpose of managing their networks. Operators might abuse this right by imposing restrictions without any justification. The approaches of Parliament and Commission are slightly diverging.

First, on the issue of unreasonable restrictions on applications the Commission accepts that the current 2003 Regulatory Framework is not sufficient to prevent network operators from setting unreasonable restrictions on running applications. Therefore, it proposes to apply on network operators a transparency obligation that requires them to clearly inform their subscribers "in advance of the conclusion of a contract and regularly thereafter of any limitations imposed by the provider on their ability to ... run any lawful application and services of their choice." The Commission therefore proposes to add a new paragraph to Article 20.5 of the Universal Service Directive. The Parliament supports this information obligation, but moves the recurring information requirements (informing the subscriber not only at the moment of concluding the contract, but also regularly thereafter) to Article 21. Hence, in the Parliament's legislative resolution, the transparency obligation can be found in Articles 20.2 and 21.4.c of the Universal Service directive. Furthermore, as already mentioned in the last section, the NRAs and the Commission can even adopt minimum quality of service requirements based on the Parliament's proposed Article 22.3 in order to "ensure that the ability of users to access or distribute content or to run applications and services of their choice is not unreasonably restricted".<sup>38</sup> These two measures will force network operators to justify every restriction related to Internet applications. It is true that "unreasonably restricted" is a vague term leaving a broad margin of appreciation to the NRA, but such notions are not uncommon in law and should not necessarily lead to legal uncertainty as long as the NRA sets out its interpretation in a transparent and timely manner. Apparently, the European Parliament did not consider it necessary or appropriate to carry over the specification from the Harbour report that:

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<sup>37</sup> See, *supra* note 10.

<sup>38</sup> See Parliament Resolution, Amendment 193, *supra* note 36.

"National regulatory authorities may consider a limitation imposed by the operator on the ability of users to access or distribute lawful content or to run lawful applications and services of their choice to be unreasonable if it discriminates according to source, destination, content or type of application, and is not duly justified by the operator" (Harbour Report, at p. 191).

Second, as far as unreasonable restrictions on terminal equipment are concerned, the Commission does not propose to take significant action. The Parliament on the other hand acknowledges this problem and proposes to oblige network operators to inform their subscribers of "any restrictions on the use of terminal equipment" (proposed Article 20.2, b Universal Service Directive).<sup>39</sup> Those restrictions should be included into the contracts between consumers and network operators. In short, the Parliament does not require the NRAs to actively intervene, but considers that increasing transparency is a sufficient safeguard to ensure that network operators do not distort competition, as well as to ensure that broadband markets remain or become competitive.

### **Prioritisation**

Prioritisation refers to a practice of network operators who apply traffic shaping technology to provide guaranteed quality of service. In general, the discussion on prioritisation is quite controversial. On the one hand, prioritisation is considered to be the best solution to improve quality of service from a technical perspective (NGNI, 2002). On the other hand, prioritisation can also potentially be applied in an anti-competitive manner in order to disadvantage competing services, thereby turning it into one of the most important network neutrality problems. From an academic point of view, arguments for and against prioritisation regulation seem to have equal weight (WU & YOO, 2007). Neither do the European Parliament and the Commission seem to entirely share the same view.

On the one hand, the Commission seems quite convinced by the economic argument and states that prioritisation can lead to better product differentiation, which

"is generally considered to be beneficial for the market (particular in industries with large fixed and sunk costs) so long as users have

<sup>39</sup> *Ibid.* Amendment 62.

choice to access the transmission capabilities and the services they want. Allowing broadband operators to differentiate their products may make market entry of content providers more likely, thereby leading to a less concentrated industry and more consumer choice." <sup>40</sup>

Furthermore, in case of problems resulting from prioritisation, the Commission alleged that the current EU rules "do not allow those who are in a dominant position to *discriminate* in an anti-competitive manner between consumers in similar situations". <sup>41</sup>

The Commission therefore did not propose changes in policy regarding prioritisation. This position is questionable based on our analysis above: because of its limited scope of application the 2003 Regulatory Framework is not apt to deal with many network neutrality problems. In addition, in a previous article we argued that neither Article 82 nor Article 81 of the EC Treaty can sufficiently deal with discriminatory provision of prioritisation (VALCKE, HOU, STEVENS & KOSTA, 2008). Hence, the Commission's initial position seemed inadequate to us to treat these kinds of prioritisation problems. Therefore, we proposed a transparency obligation on network operators stating that they have to notify their prioritised services to the public and to the relevant authorities, such as the Commission and the NRAs, in order to enable them to intervene when they consider prioritisation damages consumer welfares (VALCKE, HOU, STEVENS & KOSTA, 2008).

The Parliament seems to have noticed this gap with regard to prioritisation and is attempting to close it. In its legislative resolution, the Parliament proposed to amend Article 28.2.a of the Universal Service Directive in order to deal with the side effect of prioritisation, which suggests that:

"Member States shall ensure that national regulatory authorities are able to require undertakings providing public communications networks to provide information regarding the *management of their networks in connection* with any limitations or restrictions on end-user access to or use of services, content or applications. Member States shall ensure that national regulatory authorities have all the powers necessary to investigate cases in which undertakings have imposed limitations on end -user access to services, content or applications" (Emphasis added). <sup>42</sup>

<sup>40</sup> See Impact Assessment, p. 91. *supra* note 32

<sup>41</sup> *Ibid.*

<sup>42</sup> See the Parliament Legislative Resolution, Amendment 101, *supra* note 36.

We believe the Parliament's proposal strikes a good balance between expressing itself too soon (it seems economists so far have not really achieved a generally accepted view on prioritisation) and/or too late (taking a complete "wait-and-see" approach seems risky, since prioritisation may possibly affect long-term competition between network operators and Internet content providers). Taking into account that prioritisation is not only a promising technology to provide (useful) quality of services (yet not fully exploited by industry), but also a possible threat to competition in the information and communications markets of tomorrow, we believe the Parliament's modest proposals are sufficiently effective and proportionate for the time being – following the adage "if there is going to be error, it is better to err on the liberal side rather than the side of oversuppression" (MÜLLER, 2008).

## ■ Conclusions

The new technology of traffic shaping has the potential to challenge the long-standing technical principle of the Internet, *i.e.* the end-to-end principle that is considered the accelerator of the robust growth of the Internet at its edge for decades. While having technical advantages to support quality of service, this new technology also possibly allows network operators to discriminate against Internet content providers. In order to prevent the possible abuse of this new technology to the detriment of consumers, scholars initiated the public debate on keeping the Internet neutral, or network neutrality.

In this article, we have examined the effectiveness and proportionality of the current and future EU communications regulatory framework in dealing with the most common forms of potentially anti-competitive behaviour.

This analysis leads us to the following conclusions:

- It is difficult, if not impossible, to tackle network neutrality problems sufficiently under the current 2003 Regulatory Framework, firstly because the electronic communications regulation in principle only deals with transmission issues (and not with the relation between network operators and content providers), and secondly because the relevant market (retail broadband) is not listed as a market susceptible to *ex ante* regulation.

- However, the major network neutrality problems may be effectively addressed if the Parliament's reform proposals for the 2003 Regulatory

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Framework are accepted (although a more explicit clarification that content providers can benefit from access obligations imposed on the new framework would certainly contribute to more legal certainty). NRAs would then be given appropriate tools to deal with network operators that unreasonably restrict Internet content providers' and/or end-users' access to networks. Hence, the EU's response so far seems based on common sense and proportionality: neither a complete hands off approach, nor a Guardian Knight willing to sacrifice innovation and economic efficiency at the altar of obscure Internet freedoms (that some in the US hold to be sacrosanct).



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