

la neutralité exige que l'on garantisse l'accès des petits développeurs d'applications à l'App Store de Apple : il s'agirait d'une « plateforme essentielle » pour atteindre les usagers d'appareils mobiles.

Ce succès récent du concept de neutralité pourrait obscurcir la spécificité du débat sur la « *net neutrality* » qui exige des opérateurs qu'ils se comportent de manière non-discriminatoire et transparente dans leur gestion du trafic sur les réseaux. En même temps, il s'avère plus indispensable que jamais de réguler l'Internet, et notamment les nombreux autres goulots d'étranglement entre les usagers et les contenus.

On peut faire le pari que le concept de neutralité de l'Internet a encore de beaux jours devant lui et qu'il alimentera bien d'autres débats. Bon vent !

NET NEUTRALITY : WHAT REGULATION FOR THE INTERNET IN EUROPE AND BEYOND ?

By

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"Net neutrality" is a term first coined by US academics, in particular by Tim Wu in a 2003 article titled "*Network Neutrality, Broadband Discrimination* (1)". Nowadays, many stakeholders refer to net neutrality in the public debate on the regulation of the Internet. Net neutrality has even been called upon for regulating online platforms, such

(1) Tim Wu's paper (published in 2 *Journal of Telecommunications and High Technology Law*, 2003, pp. 141-179) is usually seen as the seminal article devoted to net neutrality, but earlier contributions exist, including M. Lemley and L. Lessig, "The End of End-to-End : Preserving the Architecture of the Internet in the Broadband Era", 48 *UCLA L. Rev.*, 2000, p. 925 ff. The articles of C. Yoo are more critical of net neutrality : "Beyond Network Neutrality", 19 *Harvard Journal of Law and Technology*, 2005, p. 2 ; "Network neutrality, consumers and innovation", 26 *University of Chicago Legal Forum*, 2008, pp. 179-262. Tim Yu also has a webpage devoted to the topic : www.timwu.org/network_neutrality.html. The underlying notion is much older than the term "net neutrality" as several communication laws, a long time ago, imposed the "impartial transmission" of messages (see the example of the 1860 law in the US "to facilitate communication between the Atlantic and Pacific states by electric telegraph"; quoted in the Wikipedia article on "net neutrality"). Tim Wu's illuminating book "The Master Switch" (London, Atlantic Books, 2010) offers a compelling history of the fight of media companies for dominance in the US, and helps to understand the future of the Internet and the need for net neutrality regulation. In Europe, the debate started in the second half of the first decade. Several contributors to the present collection of essays have shaped the academic debate in Europe : P. LAROCHE, "Network neutrality : the global dimension", in M. BURM, ed., *Trade Governance in the Digital Age*, Cambridge University Press, 2012, pp. 91-122 ; « The network neutrality debate hits Europe », *Communications of the ACM*, 2009, 52/6, p. 22-24 ; E. DEMEUX, "Neutralité : liberté ou surveillance. Fondements et éléments du droit de l'Internet", *RLDI*, Aug./Sept. 2011, n° 74, pp. 85-95 ; "Entre esprit libertaire et nécessaire réglementation. À propos de « La neutralité de l'Internet. Un atout pour le développement du numérique »", *RLDI*, Aug./Sept. 2010, N° 63, pp. 6-10. In the Benelux and France, other recent books and papers include : N. CHRIEN et W. MAXWELL, *La neutralité d'Internet*, La Découverte, Paris, 2011 ; M. PIRON, « La neutralité des réseaux et la garantie de la fourniture de services de médias audiovisuels », *RDTI*, 4/2011, p. 69-92 ; J. SIAUS, « Network neutrality and internal market fragmentation », *TILEC discussion paper*, April. 2012, 30 p. and « From competition to freedom of expression : introducing Art. 10 ECHR in the European network neutrality debate », *TILEC discussion paper*, Sept. 2011, 48 p. ; N. VAN ECK, « Net Neutrality and Audiovisual Services », *IRIS plus*, 2011.5, pp. 7-19.

as Apple's App Store (2). The increasing reference to net neutrality in various contexts might further dilute the original concept and create new problems. At the same time, net neutrality has become a real objective in the day-to-day monitoring of the network operators by telecom regulators, such as BEREC in Europe, Ofcom in the UK or ARCEP in France (3).

"Neutrality" derives from the latin word "neuter" : "neither one, nor the other". Dictionaries tend to consider the term as synonymous with "objectivity" or "impartiality". Neutrality refers to equality, even-handedness, fairness, non-discrimination, non-partisanship, etc. Do network operators respect those qualities – and do they have to – when they manage the Internet traffic ? This is a very simple way to summarize the highly complex issues raised by the ongoing debate on net neutrality and the regulation of online traffic management.

In the first part of this chapter, the issues linked to the net neutrality debate are mapped and the positions of the defenders of net neutrality and its opponents are outlined. The second part puts the net neutrality issues into perspective by summarizing the recent international discussion on a global regulation of the Internet and the rejection of a draft treaty at the end of 2012. The third part is devoted to an overview and history of the burgeoning regulatory environment and the recent initiatives in Europe. The last part addresses several questions about whether and how net neutrality and Internet regulation should be achieved in Europe.

1. – NET NEUTRALITY PARTISANS AND SCEPTICS : MAPPING THE DEBATE

1.1. – *The partisans of net neutrality and the pro-regulation approach*

For its partisans, "Net neutrality means simply that all like Internet content must be treated alike and move at the same speed over the network. The owners of the Internet's wires cannot discriminate. This is the simple but brilliant « end-to-end » design of the

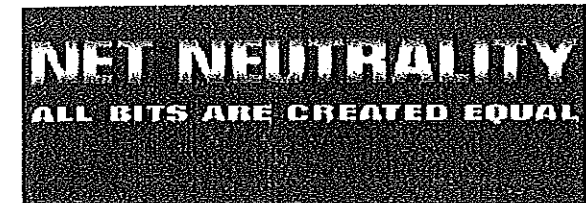
(2) Annoyed that a French start-up, AppGratis, had been banned from offering free apps to the users of Apple mobile devices, the French Minister for digital industry, Fleur Pellerin, argued that the net neutrality principle applies to Apple's App Store (*Financial Times*, 12 April 2013).

(3) BEREC stands for the Body of European Regulators of Electronic Communications. Ofcom is the « Independent regulator and competition authority for the UK communications industries » and ARCEP (Autorité de régulation des communications électroniques et des postes), the French telecom regulator.

Internet (4)". Well-known proponents of net neutrality include earlier developers of the Internet, such as Vinton Cerf, the creator of the TCP/IP technology (5) (who now acts as "Chief Internet Evangelist" for Google) and Tim Berners-Lee, the inventor of the World Wide Web. Tim Berners-Lee strongly supports regulation to stop broadband providers playing favourites with Internet content (6).

But the pro-neutrality constituency comprises many groups, such as consumer advocates and human rights organisations, which usually conflate the issue of neutrality with online freedoms. The ideal of "the open Internet" is now associated with net neutrality and is mentioned in official documents (7). This has led to a delicate blending of the online freedoms and rights issues with the question of traffic management.

The "cyber utopians" of a brave new world tend to claim that any blocking of content or any type of traffic management is incompatible with freedom of information as it leads to some discrimination between Internet bits. They say that only the law can safeguard freedom on the Internet. The message that electronic signal equality should be enshrined in the law is encapsulated in this telling image :



*Courtesy of some unknown designer : the image is available online,
but without credit*

Partisans of net neutrality thus consider some intervention of the State necessary to ensure equality. Net neutrality is not synonymous with a "laissez-faire" approach ; on the contrary.

(4) See the opinion of L. LESSIG and R. MCCLESNEY, No Tolls on the Internet, The Washington Post, 8 June 2008 (available at <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/07/AR2008060702108.html>).

(5) The Internet protocol suite comprises mainly the Transmission Control Protocol (TCP) and the Internet Protocol (IP). The TCP/IP provides the end-to-end connectivity and specifies how data should be addressed, transmitted, routed and received (see the Wikipedia article on « Internet protocol suite »).

(6) See the Sept. 8/9, 2012 interview of T. Berners-Lee in the Life & Arts supplement to the *Financial Times*. The interview underlines that Tim Berners-Lee « faces battles over net neutrality ».

(7) See for example the 2011 Commission's Communication on "The open Internet and net neutrality in Europe", COM(2011) 222 final at http://europa.eu/legislation_summaries/information_society/internet/si0022_en.htm). However, "net neutrality" is a more elaborated and commonly used regulatory concept.

Net neutrality is also backed by technology companies and by most Internet companies, although their positions nevertheless may vary. Initially, US Internet companies such as Amazon, eBay, Google, Microsoft and Yahoo! strongly advocated the net neutrality principle, but some have since opted for a less radical view. For instance, Google changed its position when, in August 2010, it reached an agreement with Verizon, the US telecom operator. Since then, Google opposes *complete* net neutrality. Eric Schmidt, now Google's president, summarizes the position of his company as follows: *"I want to be clear what we mean by net neutrality: What we mean is if you have one data type like video, you don't discriminate against one person's video in favour of another. But it's okay to discriminate across different types, so you could prioritize voice over video (8)"*. This position is different from the view that discrimination is only acceptable on a private network, something that Tim Wu accepts. This radical shift in Google's position is probably due to the fact that Google now runs Content Delivery Networks (CDNs) which allow routing its (video) content at high speed up to the users' access providers. Understandably, Google does not want this network to be subject to a neutrality rule.

Google's view differs from the more radical one advocated by other Internet players. Skype, for instance, complains that its VoIP (Voice over IP) service is regularly discriminated against by European telecom operators. Companies such as Skype or WhatsApp, which are over-the-top (OTTs) players, are not vertically integrated firms. Unlike companies which have a stake in the infrastructure, those OTT actors rely on others. For them, a basic standardized IP access product is what they need, and, according to G. Serentschy, recent head of BEREC, *"in this context, net neutrality rules, should also guarantee OTTs the provision of their services (9)"*.

The telecom industry knows the *point faible* (or, to quote Tim Yu, the "soft underbelly (10)") of the Internet service providers: "How do you think they are going to get to consumers?" OTTs are like tightrope walkers: if their services are not adequately transported on the Internet infrastructure, OTTs risk falling and failing (11).

(8) Interview of E. Schmidt quoted in D. GOLDMAN, Why Google and Verizon's net neutrality deal affects you, CNN Money, 6 August 2010.

(9) G. SERENTSCHY, Regulation 2.0, Working paper, July 2012 (at: https://www.rtr.at/uploads/media/Regulation_2_0.pdf).

(10) T. Wu, The Master Switch, London, Atlantic Books, 2010, p. 285.

(11) Tim Wu's book (on p. 283) contains a similar representation of Google business as a cyclist on a rope who has to perform a balancing act between content and transport. Google obviously relies on the content provided by third parties (newspapers, books, user-generated

The imposition of net neutrality is likely to impact the experience of Internet users; beyond its direct effect on the operators of the network infrastructure and the service providers, net neutrality is of major interest to consumers. In the US, consumer groups have pushed for regulation since at least 2006. In Europe, consumer organisations have put net neutrality on their agenda more recently. One of their main concerns is to ensure consumers truly get the Internet speed promised by their provider. More transparency is thus advocated by BEUC, the European consumers association (12). The possible impact on Internet users, including on the huge number of users of mobile devices, explains why several bodies representing citizens such as the European Parliament or some national Parliaments have adopted resolutions or even laws on net neutrality in recent years (see below under IV). For Ms Catherine Trautmann, a Member and a former president of the European Parliament, *"[n]et neutrality, from a rather « marginal » topic in the European regulatory debate, has become a major challenge for policy-makers (13)"*. There is clearly a public policy dimension to the debate, and we can expect net neutrality to remain the focus of attention of European policy-makers, prompting the regulators to be more proactive.

1.2. – The opponents or sceptics and the anti-regulation approach

Opponents of net neutrality are less vocal – how to oppose the idea of an open Internet with equal access to content? Some have expressed a sceptic view about the adoption of net neutrality principles. For instance, Robert Kahn, another designer of the Internet TCP/IP protocol, believes that net neutrality is a slogan that would "freeze innovation in the core of the Internet". A number of US think tanks such as the Cato, Goldwater, and Competitive Enterprise institutes which defend a free market philosophy also oppose net neutrality regulation. This view is echoed by network operators and some providers of telecom equipment. AT&T, the largest US operator with a significant presence

content, etc.) which has led to conflicts with content providers (see Alain STROWEL: *Quand Google défie le droit*, De Boeck-Larcier, 2011). Google's services also need to be 'transported' at high speed to remain attractive. Therefore, Google has strengthened its position by concluding agreements with operators (Content Delivery Networks) and by investing in infrastructure, for example through the Google Fiber project.

(12) See for ex. the Sept. 2012 « Topic of the month » page of BEUC: <http://beuc60years.eu/topic-of-the-month/2012/september/net-neutrality>.

(13) Quotation of Ms Trautmann on the BEUC page (see previous footnote).

worldwide, argues that “prior decisions by governments to avoid unnecessary regulation of the Internet are validated every day by the spectacular growth of the Internet and its remarkable contribution to culture, political discourse, and economic development throughout the world (14)”. For AT&T, the net neutrality debate is based on speculation which in turn “rests on deeply flawed premises, including that the Internet has always been an inherently neutral collection of “dumb pipes” that cannot distinguish among packets (...) and that new tools allowing operators to prioritize particular data now threaten the Internet’s supposed historic ‘neutrality’”. With regard to the future, these operators argue that prioritization of bandwidth is necessary for investments and innovation on the Internet. If they are allowed to provide preferential treatment in the form of tiered services (with a payment for transferring some data packets faster than other Internet traffic), network operators claim that the huge investments required for the next-generation infrastructure will be made because their cost can be shared with the large online service providers who generate most of the traffic, such as YouTube (owned by Google).

Net neutrality has been questioned by those who advocate the need to “police” the Internet to fight illicit content. For instance, traditional media companies (or collective management societies) occasionally suggest that the connections with illicit sites should be slowed down through the use of filters, if not suspended at the end of a “graduated response”, an escalation process designed to address online piracy (15). The fight against piracy, in extreme cases, leads to injunctions against access providers or to orders to suspend access for end-users. But the delicate debate over online copyright enforcement should not be commingled with the net neutrality debate. Indeed, the non-discrimination rule at the core of net neutrality only applies to *licit* content. Even the most ardent proponents of net neutrality agree that the non-discrimination rule should not apply in cases of illicit content such as spam or pirated works. The net neutrality debate is independent from the discussion about online enforcement or any issue involving cybercrime. In reality, the proponents of net neutrality tend to adopt a pro-regulation stance more in line with those who advocate measures against illicit content and behaviour.

(14) See AT&T, Comments of AT&T on the AGCOM Public Consultation on Net Neutrality, 3 May 2011, p. 2.

(15) On the various responses to online piracy, whether based on legislation, court decisions or agreements between content and access providers, see : C. DOUTRELEPONT, Fr. DUBUISSON and A. STROWEL (eds), *Le téléchargement d'œuvres sur Internet*, Larcier, 2012, 431 p.

Net neutrality is also of interest to the academic community. For researchers who analyse the regulation models, the debate on net neutrality shows how difficult it is to define an acceptable regulatory framework in a global environment such as the Internet. The challenge to agree on a common framework to regulate the Internet is well illustrated by the 2012 debacle at the World Conference on International Telecommunications (WCIT) that took place in Dubai.

2. – NET NEUTRALITY AND THE BROADER DIFFICULTY TO DEFINE A GOVERNANCE MODEL FOR THE INTERNET

The failure of the December 2012 WCIT to agree on a global treaty for the regulation of telecommunications to replace the 1988 International Telecommunications Regulations (ITRs (16)) shows how different ideologies and political strategies make it impossible for the international community to find a middle-ground position on the regulation of the Internet. A quick review of the negotiating process and of the positioning of the parties is instructive. Lines of division comparable to those in the net neutrality debate appeared during the WCIT, with the additional complexity that the negotiation of a regulatory framework at the international level also involved the strategies of sovereign states. On one side, the US, followed by Canada and the UK, decided to walk away from the negotiations, arguing that the draft treaty would allow some countries to suppress free speech. On the other side, Russia, apparently followed by countries such as China and Iran, took the lead in the run-up to the conference, supporting the view that Internet governance should be handed over to the United Nation's International Telecommunications Union (ITU). In the end, the 1600 delegates from more than 190 nations who gathered in Dubai could not agree on the proposed treaty. As emphasised by one observer belonging to the US delegation, “the collapse of the talks marks just the first battle in what will be an enduring global contest to define the governance and control of the Internet in the 21st century (17)”.

(16) The ITRs (see : <http://www.itu.int/oth/T3F01000001>) is a treaty developed at the 1988 World Administrative Telegraph and Telephone Conference which has not been revised since then. The ITRs are intended to facilitate “global interconnection and interoperability” of telecommunications traffic across national borders. The ITRs also set rules for the quality of international services, sufficiency of facilities, or the international routing, charging, accounting and billing between operators, etc. (see the presentation by the Internet Society on <http://www.internetsociety.org/itr>).

(17) G. GOLDSTEIN, *The struggle to keep the internet free from state control*, *Financial Times*, 16 Dec. 2012, p. 9 (the author is senior vice-president at Silver Lake and served on the US delegation to the WCIT).

The Dubai blockage is probably due primarily to the early attempt by Russia and other countries to use the WCIT to reinforce their power to control the Internet. But it is also largely due to the "propaganda warfare" led by the US, together with some private interest groups and Google (18). Those parties convinced delegations that only "authoritarian regimes" could support the treaty (19). This successful strategy, also described as "*a master class in foot-dragging, hardball diplomacy*" from the US (20), has been dismissed by another observer as "*complete nonsense and unacceptable* (21)". Other supporters of the treaty considered that "*the US was using the principle of freedom as a cover to protect companies such as Google and Facebook from attempts to co-ordinate regulation* (22)". There might be some truth to that.

At the same time, the new quality-based model for the Internet, advocated in Dubai by the European Telcos (through their association ETNO) and the mobile operators, raises some legitimate concerns. The proposed treaty would have imposed a type of regulation on Internet companies similar to the one applicable to telecom operators. In particular, the so-called « sender pays » model requiring sources of Internet traffic to pay destinations, similar to the way funds are transferred between countries using the telephone, was put on the negotiation table. Internet companies feared they would have to pay new tolls in order to reach people across borders. Of course Internet activists are hostile to the idea of "taxing" the Internet. For the *Internet Society*, a US organisation that defends an open Internet, the old telecommunications regulatory model should not apply to the Internet: "the Internet is different (23)". This is true too.

The Internet has clearly worked well, but it "is far from perfect". After all, the Internet as we know it has allowed countries such as China to engage in widespread Internet censorship. And in areas such as cybersecurity, online privacy, enforcement of intellectual property,

(18) See « Google attacks UN net conference », BBC News, 21 November 2012, available at : <http://www.bbc.co.uk/news/technology-204296225>.

(19) Numerous positions in favour of a free Internet were published just before and during the WCIT in an obviously co-ordinated lobbying campaign (see as an example, the opinion of J. Kampfner, a free expression campaigner and adviser to Google, in the *Financial Times*, 30 Nov. 2012, p. 9 under the title "The Internet must be kept free from the autocrats' surveillance").

(20) M. Franklin, Comment : Telecoms treaty a masterclass in US diplomacy, mLex, 19 Dec. 2012.

(21) Those are the words used by Mr Bernabè, chairman of Telecom Italia and president of GSMA, the mobile operators' association (quoted by R. Sanderson and D. Thomas, *US under fire after telecoms treaty talks fail*, *Financial Times*, 17 Dec. 2012, p. 19).

(22) *US under fire after telecoms treaty talks fail*, *Financial Times*, op. cit.

(23) See the Oct. 2012 submission of the Internet Society to the WCIT : <http://www.internetsociety.org/doc/WCITSubmissionOctober2012>.

more could be done to improve the situation (24). The existing regulatory framework might thus not be the best one. At least, a better implementation of the governing principles and rules appears necessary.

Private parties were concerned by the WCIT debate, but governments were as well, and not only those endeavouring to police the web. If the global Internet companies, most of which are American, are afraid that the new regulatory environment creates additional costs, the US government risks losing control if the regulatory oversight of online security and fraud, traffic accounting and traffic flow, management of Internet Domain Names and IP addresses, etc., is transferred at the international level and managed by a United Nations' body. So far, the governance of the Internet infrastructure remains in the hands of private and multi-stakeholder organisations, such as ICANN (25) or the IETF (26), itself formally part of the Internet Society (27). Some of those organisations remain quite close to the US authorities. As noticed by an observer, more geographically balanced governance could easily co-exist with a free Internet (28). Advocates of the status quo should accept more accountability from the private organisations in charge of the Internet, as well as a model which adequately reflects the changing geo-political realities and the emergence of new powers.

We will see in the coming years if the existing private model of Internet regulation is maintained or if a compromise reached at the international level changes the rules of the game (29). A private, multi-stakeholder model has clear advantages that should be preserved, but there should be enough room for oversight by a public body as well.

(24) See the balanced view of A. RENDA, *The U.N., Internet Regulator?*, *The Wall Street Journal*, 27-29 April 2012, p. 10 who, among others, mentions as problematic the ICANN-led expansion of the top-level domains which risks jeopardizing the enforcement of trademarks.

(25) The Internet Corporation for Assigned Names and Numbers (ICANN) « coordinates » the Domain Name System (DNS), Internet Protocol (IP) addresses, generic (gTLD) and country code (ccTLD) Top-Level Domain name system management, and root server system management functions, among other things. These services were originally performed under US Government contract by the Internet Assigned Numbers Authority (IANA).

(26) The Internet Engineering Task Force (IETF) develops and promotes Internet standards, cooperating closely with the other standards bodies and dealing in particular with standards of the Internet protocol suite (TCP/IP).

(27) The Internet Society (or ISOC) is an international, non-profit organization founded in 1992 to provide leadership in Internet related standards, education, and policy. It presents itself as a cause-driven organization governed by a diverse Board dedicated to ensuring that the Internet stays open and transparent.

(28) A. RENDA, *The U.N., Internet Regulator?*, op. cit.

(29) In the discussion on the revision of the 1988 Telecom Treaty, the EU negotiators were apparently ready to accept an update of the rules, but did not care whether this occurred as telecoms and Internet developed without an overhaul of the international rules, meaning that the status quo would not be harmed.

3. – THE MILESTONES OF NET NEUTRALITY IN EUROPE

The WCIT debate on global regulation of the Internet encompasses the net neutrality issues (30), and in a sense, somewhat mirrors the ongoing debate on net neutrality, which also sees the telecom operators opposing Internet companies. Strangely, while asking for some regulation at a global level, network operators usually oppose, or are reluctant towards, net neutrality principles at a national/regional level. More regulation is welcome here, but not there.

In a first phase, the developments in Europe involved the European Commission and other bodies such as the European Parliament and the Social and Economic Committee. In a second phase, regulatory bodies such as BEREC intervened, while national initiatives also flourished.

3.1. – Initiatives by European institutions

In the EU, the first consecration of net neutrality appeared in the review of the “electronic communications package” completed in late 2009. It contains a European Commission Declaration on Net Neutrality (31) which states, among other things, that *“the Commission attaches high importance to preserving the open and neutral character of the Internet, taking full account of the will of the co-legislators now to enshrine net neutrality as a policy objective and regulatory principle to be promoted by national regulatory authorities, alongside the strengthening of related transparency requirements and the creation of safeguard powers for national regulatory authorities to prevent the degradation of services and the hindering or slowing down of traffic over public network”*. The Commission committed itself to *“monitor closely the implementation of these provisions in the Member States, introducing a particular focus on how the “net freedoms” of European citizens are being safeguarded”*. For the time being, the Commission indicated that it *“will invoke its existing competition law powers to deal with any anti-competitive practices that may emerge”*. Competition law was thus seen as the regulatory tool by default. The Commission declaration does not close the debate; on the contrary, it invited European authorities and regulators to do more. That is exactly what happened.

(30) This was underlined in a Financial Times article on the WCIT (see D. THOMAS, R. WATERS and J. FONTANELLA-KHAN, *Command and control*, F.T., 28 August 2012, p. 5).

(31) Commission declaration on net neutrality, OJ, 2009, C 308/02, available at : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:308:0002:0002:EN:PDF>

On April 19, 2011, the Commission published a Communication entitled *“The open internet and net neutrality in Europe (32)”* which again emphasizes the openness requirement alongside net neutrality. The Commission also recognized that “there is no set definition of net neutrality” (p. 3 of the Communication). It acknowledged that the problems arising in the net neutrality debate are “correlated to the degree of competition existing in the market” (p. 4). Because of the “lack of evidence” that legislation is needed and the findings that most issues are “solved voluntarily, often through intervention by the National Regulatory Authority of pressure created by adverse media coverage”, the Commission did not advocate any further legislation. The Commission hoped that the existing rules on contracts, transparency, switching and quality of services (33) that are part of the EU electronic communications framework would be sufficient.

On October 26, 2011, the European Economic and Social Committee (‘ECOSOC’) issued a rather critical Opinion (34) on the Commission’s April 19th Communication. This Opinion attempts to distinguish what an Open Internet requires and what net neutrality means. For the ECOSOC, the web is open, but more and more of the applications we use on smart phones and social networking sites are part of a closed Internet accessible only through proprietary interfaces. The issue of technical standards used by service providers is thus central in the debate on Open Internet (35). Net neutrality, by contrast, is about the commercial treatment of Internet customers by operators and the risk of discriminatory practices.

Considering that “the specific principle of net neutrality is not defined in EU law, nor is it adequately covered by any combination of provisions”, the ECOSOC advocated the following principles : (i) a minimum quality of internet access should be defined ; (ii) non-discrimination between internet traffic streams should be the general rule ; (iii) some internet traffic management mechanisms should be allowed only if they comply

(32) See : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0222:FIN:EN:PDF>. This Communication was discussed by G. Abbamonte of DG Connect during the conference that took place at the European Parliament (Brussels) on Febr. 27, 2012 (see the presentations put online at : <http://www.ipdigit.eu/2012/02/net-neutrality-where-do-we-stand-in-europe/>).

(33) Page 8 of the Communication (see art. 20(1)(b), art. 21(3)(c)(d) and art. 22(3) of the Universal Service Directive, and paragraph 47 of the Citizens’ Rights Directive).

(34) See : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:024:0139:0145:EN:PDF>.

(35) The access to dominant online platforms, such as Apple’s App Store (see above footnote 2) relates to the openness debate, rather than the neutrality principle. This access issue should also be regulated through competition law.

with the general principles of relevance, proportionality, efficiency and non-discrimination ; (iv) managed services can be marketed provided they do not degrade the quality of Internet access below a certain satisfactory level ; and (v) an EU-wide set of transparency principles and a set of standardised information should be adopted.

On November 17, 2011, the European Parliament adopted a Resolution (36) which takes note of the Commission's Communication indicating that *"there is, at this stage, no clear need for additional European-level regulatory intervention on net neutrality"*. The Parliament nevertheless pointed to *"the potential for anti-competitive and discriminatory behaviour in traffic management, in particular by vertically integrated companies"* and highlighted the risks for net freedoms such as freedom of expression, freedom of access to information, freedom of choice for consumers, and media pluralism (but the economic freedom for operators to conduct their business is not mentioned).

Net neutrality remained under the European spotlight throughout 2012. On July 23, 2012, the European Commission launched an online public consultation on "specific aspects of transparency, traffic management and switching in an Open Internet (37)". Many stakeholders responded to this consultation at the end of 2012.

Parallel to this open communication, the Commission in December 2012 released a "draft Recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (38)". This Recommendation promotes the roll out of the next generation access networks, and is thus not directly related to the net neutrality issues, but the adequate sharing of the costs for the investments in the future broadband is part of the broad net neutrality debate.

3.2. – Initiatives of National Authorities in Europe, and the Tensions with the EU Agenda

The net neutrality debate also illustrates the permanent tension between the European institutions willing to rule on the issue, such as

the Commission's Directorate General Connect led by Commissioner Kroes, on the one hand, and the Member States which are not always willing the Commission to take the lead, on the other. In its November 2011 Resolution, the European Parliament also stressed the need for a "consistent European approach" with the related need for the Commission *"to follow closely the adoption of any national regulations related to net neutrality"*.

Ms Kroes has pushed for EU member states to refrain from introducing individual net neutrality laws (39), saying that legislating on an ad-hoc country-by-country basis would « slow down the creation of a Single Digital Market ». But some countries could not wait any longer, in particular the Netherlands. In June 2011, the Netherlands was the first country in Europe to opt for a net neutrality law (it apparently followed only Chile, the first country in the world to address net neutrality in its August 2010 legislation). Prompted by KPN's (the Dutch telecom operator) announcement that it would charge customers extra for accessing certain Internet applications (such as Skype's VoIP and the SMS-substitute smartphone application WhatsApp), one of the Chambers of the Dutch Parliament passed a law on net neutrality in June 2011 (40).

In a speech on October 3, 2011, Commissioner Kroes stressed : *« I regret very much that The Netherlands seems to be moving unilaterally on this issue. We must act on the basis of facts, not passion ... For example, requiring operators to provide only "full internet" could kill innovative new offers. Even worse, it could mean higher prices for those consumers with more limited needs who were ready to accept a cheaper, limited package. I have asked BEREC, where all Member States' telecom regulators are represented, to give me facts and figures on transparency, blocking, throttling, and switching. It is very important that we wait for the facts and figures before acting. And if we do need to act, we must do so in a coordinated way across Europe (41) »* From that point on, "facts and figures" were the focus of attention.

(36) See : <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2011-0511&language=EN&ring=B7-2011-0572>.

(37) See <http://ec.europa.eu/digital-agenda/en/line-public-consultation-specific-aspects-transparency-traffic-management-and-switching-open>.

(38) The draft Recommendation is available at http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=9162. On March 26, 2013, BEREC submitted an Opinion on the draft Recommendation (See BoR (13) 41 at http://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/?doc=1244).

(39) See B. Wood, Kroes : I will end net neutrality waiting game, May 29, 2012, available on : <http://www.zdnet.com/kroes-i-will-end-net-neutrality-waiting-game-4010026293/>

(40) Following the Dutch developments, the Belgian Post and Telecommunications Institute, in October 2011, issued an Opinion on the pending amendments to the electronic communications law submitted to the Belgian Parliament in order to ensure net neutrality (See : <http://www.ibpt.be/ShowDoc.aspx?objectID=3628&lang=fr>).

(41) N. Kroes, *Investing in digital networks : a bridge to Europe's future*, speech at the ETNO Financial Times 2011 CEO SUMMIT, available at : http://europa.eu/rapid/press-release_SPEECH-11-623_en.htm.

3.3. – *Initiatives of the European Regulator for Electronic Communications and of National Regulatory Authorities*

Net neutrality, because of its impact on the freedom to access online services and information, clearly has a political component. At the same time, it is a highly technical issue that requires a fine-tuned management by regulators and the introduction of concrete rules for transparency and traffic management. An adequate regulation, in turn, must be based on the right facts and on a thorough knowledge of the underlying technical infrastructure.

Several telecom regulators, in particular the Body of European Regulators for Electronic Communications (BEREC), have investigated the practices in the recent years. Since the end of 2011, BEREC has published a set of documents on net neutrality, including the December 2011 Guidelines on Transparency and its analysis of Quality of Service in the scope of net neutrality (42). On 29 May 2012, BEREC published the results of its traffic management investigation (43) undertaken upon the Commission's request. BEREC confirms that traffic management practices such as blocking and/or throttling of peer-to-peer traffic and blocking of VoIP are widely reported. In relation to congestion management, most operators use an "application-agnostic" approach (e.g., active buffering), while others use "application-specific" techniques (typically in order to throttle specific traffic, such as video streaming). In December 2012, BEREC issued several additional reports which assess IP interconnection, offer Guidelines for Quality of Service and report on differentiation practices and related competition issues in the context of net neutrality (44).

For BEREC, the key question of the net neutrality debate is "how much control operators can legitimately exert over the traffic on their networks (45)". BEREC view's is that "the situation appears to be mostly satisfactory and problems are relatively rare (46)". BEREC insists that net neutrality guidelines should remain flexible and "acknowledges that market situations and regulatory national frameworks may vary, which could result in different interventions, if any, from Member States to Member States (47)". No common European approach to net neutrality

(42) BoR (10) 67 and BoR (11) 53.

(43) BoR (12) 30. See [http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Traffic % 20Management % 20Investigation % 20BEREC_2.pdf](http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Traffic%20Management%20Investigation%20BEREC_2.pdf).

(44) See respectively BoR (12) 130, 131 and 132.

(45) Summary of BEREC positions on net neutrality, BoR (12) 146, p. 2.

(46) Ibidem, p. 10.

(47) Ibidem, p. 10.

can thus be expected as National Regulatory Authorities (NRAs) will possibly decide the detailed conditions (triggers and thresholds) for intervening. This is far from satisfactory.

Over the past years, NRAs in Europe were quite active on the net neutrality front. However, their involvement did not lead to the adoption of any law ; on the contrary, they silently resisted legislative initiative or were at least sceptical about the value added of a law. Nevertheless there has been an intense activity at national level in terms of reporting. Several reports outlining the NRA approach to net neutrality were released in particular in France (ARCEP) and the UK (Ofcom (48)). As outlined in ARCEP's report of September 2012, the approach promoted in France "is a progressive one, based first on immediate, preventive actions aiming at promoting competition and transparency, and the disclosure of ARCEP's analysis of issues ; second, on the ability for Internet's companies, operators or content and application providers to appeal to ARCEP to settle a dispute, particularly in relation to traffic management and interconnection ; and finally on ARCEP's ability to take prescriptive decisions in the case a general or discriminatory degradation of quality of service should be observed". More recently, ARCEP, the French NRA, has introduced a system for measuring and tracking the quality of Internet access services (49).

4. – WHAT REGULATION FOR NET NEUTRALITY AND THE INTERNET ?

Below, several questions linked to the net neutrality debate are addressed, beginning with the more general questions.

4.1. – *To legislate or not to legislate on net neutrality ?*

Should legislation be adopted or could regulation work adequately without a legislative framework ? In Europe, Parliaments now feel they have to be involved and there is clear pressure in favour of laws on

(48) See for France : the Sept. 2012 Report of ARCEP on net neutrality ([http://www.arcep.fr/index.php?id=8571&L=1&tx_gsactualite_pi1\[uid\]=1541&tx_gsactualite_pi1\[backID\]=1&eHash=9a8ae7ef0930be3abdc869c2863cd54f](http://www.arcep.fr/index.php?id=8571&L=1&tx_gsactualite_pi1[uid]=1541&tx_gsactualite_pi1[backID]=1&eHash=9a8ae7ef0930be3abdc869c2863cd54f)). For the UK : Ofcom's approach to net neutrality, 24 Nov. 2011 (this report was based on a 2010 consultation) (<http://stakeholders.ofcom.org.uk/binaries/consultations/net-neutrality/statement/statement.pdf>).

(49) See the 25 March 2013 press release ([http://www.arcep.fr/index.php?id=8571&L=1&tx_gsactualite_pi1\[uid\]=1597&tx_gsactualite_pi1\[annee\]=&tx_gsactualite_pi1\[theme\]=&tx_gsactualite_pi1\[motscle\]=&tx_gsactualite_pi1\[backID\]=26&eHash=e8cf44886944272cbe8ebf246d353d4](http://www.arcep.fr/index.php?id=8571&L=1&tx_gsactualite_pi1[uid]=1597&tx_gsactualite_pi1[annee]=&tx_gsactualite_pi1[theme]=&tx_gsactualite_pi1[motscle]=&tx_gsactualite_pi1[backID]=26&eHash=e8cf44886944272cbe8ebf246d353d4)).

net neutrality. Some countries in Europe, such as the Netherlands and Slovenia, have already adopted a law on net neutrality. In France, the newly installed Digital Council (the Conseil national du numérique⁽⁵⁰⁾ (CNum)), an advisory council to the competent Ministry, adopted an Opinion on net neutrality on March 1, 2013⁽⁵¹⁾. In rather vague terms, this Opinion states that "*French legislation does not sufficiently protect freedom of expression in view of the development of content filtering, blocking, censorship and slowing practices*"; therefore, the CNum pleads for the incorporation of a provision in the 1986 Freedom of Communication Act as follows : "*The neutrality of communication networks, infrastructures and access and communication services open to the public by means of electronic channels shall guarantee access to information and means of expression on a non-discriminatory, equitable and transparent basis*". Nondiscrimination and transparency principles are thus likely to be affirmed in a future French law. We can expect more laws on net neutrality to be adopted throughout Europe. This might be a positive development if those laws offer the adequate framework and the right incentives for the regulators to effectively monitor the markets. The French Digital Council, while advocating the adoption of a law, admits that the effectiveness of the net neutrality principle requires indicators be set up to measure the level of neutrality and that this should be done together with the regulatory authorities (and the stakeholders).

4.2. – To regulate or not to regulate net neutrality ?

To regulate or not to regulate net neutrality, that is the (second) question. The pressure for some form of regulation has increased over the few years, whether in the US or in Europe.

On December 21, 2010, the US Federal Communications Commission (FCC) adopted an order entitled "In the Matter of Preserving the Open Internet⁽⁵²⁾". The order contains three basic Open Internet rules : (i) the transparency rule requiring broadband providers to "disclose information regarding their network management practices" and the commercial terms of their services ; (ii) the no blocking rule prohibiting access providers to "block lawful content, applications, services or non-harmful devices"; (iii) the third rule (on nondiscrimination) prohibiting broadband providers from "unreasonably discriminat[ing] in transmitting lawful network traffic." The constitutionality of this order

⁽⁵⁰⁾ <http://www.cnnumerique.fr>.

⁽⁵¹⁾ <http://www.cnnumerique.fr/en/net-neutrality/#>.

⁽⁵²⁾ See http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1_Red.pdf.

is now challenged in *Verizon v. FCC* (53). A previous attempt by the FCC to conjure a role for itself with respect to regulation of the Internet was vacated in 2010 : according to the D.C. Circuit Court, the FCC was exceeding its statutory authority. The constitutional constraints in the US and the liberal stance of the courts make it difficult for the FCC, the body in charge of regulating communications, to play an active role in preserving the openness of the Internet.

What about Europe ? There is no similar constitutional constraint, but the fragmentation of the markets creates complications. BEREC's view in 2010 was still very restrained because breaches of neutrality were exceptional and promptly solved under public pressure. The common opinion was that there was no need for a regulator to intervene. BEREC's position evolved since then ; as already outlined above, several reports of BEREC now deal with issues of transparency, Quality of Service, traffic management, IP interconnection in the context of net neutrality. Net neutrality appears as a horizontal issue that covers many facets, some of which were addressed separately in the past. Because of the public dimension of the debate, net neutrality somehow coalesces several regulatory initiatives under a more visible label.

4.3. – Should regulation rely on the competition law authorities or on dedicated authorities ?

The implementation of net neutrality arguably requires the intervention of a dedicated body. The following question remains : should net neutrality be regulated *ex post* through competition law only ? Or should an *ex ante* regulatory regime be set up ? The early responses favoured a competition-based regulation, at least in Europe. Some of the contributors to this collection of essays support this form of regulation. It now seems that a specific regulatory regime is being defined through the step-by-step approach of BEREC and of some national regulators (see above).

An efficient regulation of traffic management probably needs to be supervised by a telecom regulator. Only the most obvious forms of discrimination involving a dominant player will be caught up by competition law instruments. Indeed, competition law can only be brought to bear if the operator holds a significant market power and the situation can be framed as involving a refusal to deal. Because of its limitations, competition law must be supplemented by a specialised monitoring of traffic management practices.

⁽⁵³⁾ <http://www.fcc.gov/document/verizon-v-fcc-no-11-1355-dc-cir-1>.

But an adequate regulation should rely on the input of private parties as well. Consumer organisations and other groups can play an important role as “watch dogs” : as they receive the complaints of citizens, they are best placed to identify the problems and the forms of discrimination eventually imposed by access providers, and to report those issues to the regulators in charge.

4.4. – *What is the prerequisite to regulate on net neutrality ? In need of more transparency*

To draw the line between an anti-competitive discrimination and an efficient one, more information is needed in the first place. Transparency is thus the prerequisite for any regulation of net neutrality, and transparency towards users and transparency towards regulators must be distinguished.

Transparency towards users could require, as suggested by the French regulator ARCEP, that operators provide “*end-users with clear, precise and relevant information on the services and applications that can be accessed through their data services, of the traffic management practices employed on their networks, the quality of service of these offers and their possible limitations* (54)”.

Regarding the information to be delivered to users, the Commission highlighted the need for more transparency several times. The Commissioner in charge of the Digital Agenda, Ms Kroes, wants “*to ensure that Internet users can always choose full Internet access – if that’s what they want*”. Thus net neutrality requires gathering the relevant evidence : “*are users properly informed about what’s on offer ? Are they provided with the right quality of service ? Is there blocking and throttling going on ? In practice, how easy it is for users to “switch” operators of services* (55)?” The focus is on transparency for consumers so that they have the right information to choose the service that best suits them.

But the information provided on the offer and quality of services may not be understandable and usable by the standard end-users, and it is thus essential that other actors in the regulatory field also receive the information. For instance, consumer groups, together with regulators,

(54) ARCEP press release of Sept. 30, 2010 (« ARCEP has published ten proposals and recommendations for promoting a neutral and high quality Internet »).

(55) N. Kroes, What does it mean to be open online ?, speech at the World Wide Web Conference 2012, 19 April Lyon, available at : http://europa.eu/rapid/press-release_SPEECH-12-275_en.htm.

could double-check whether the service provided corresponds to what has been announced by the operator.

Transparency towards a regulator is also needed. In France, the NRA (i.e., ARCEP) recently imposed reporting obligations on operators regarding the interconnection and routing of data, in the form of a questionnaire they must submit every six months. This obligation is seen by US operators AT&T and Verizon as excessive in the context of a competitive market, and both companies decided in 2012 to challenge the new requirements before the French State Council (Conseil d'Etat (56)). Their argument to strike down the ARCEP measure is that “*reporting obligations violate the deregulatory principles of the EU framework*” and that there are “*less burdensome and much more proportionate measures* (57)”.

More transparency is thus needed for consumers to exercise their freedom to choose the service they want, but also to ensure that regulators can monitor the market and fine-tune its functioning where needed. The regulators are equipped to deal with complex data, unlike consumers who need a decent level of transparency concerning the Quality of Services and prices, but not the amount of detailed information that only regulators can usefully manage.

The transparency issue reminds us that the Internet might be open and rich at the layer of content, but below it remains a deep black box : how does the information circulate on the wires ? What is filtered through intermediaries, including access or infrastructure providers ? A specific regulatory regime is needed because of the amount of detailed information that must be analysed to decide whether discrimination is justified, and because of the need to rely on expertise (telecom engineers and online traffic specialists), something that a specialised body, such as BEREC, can manage, but an authority focused on competition probably cannot.

4.5. – *What are the main components of the net neutrality requirement ?*

When the discussion started, the emphasis was on the anti-discrimination rule in traffic management, whose enforcement requires some form of transparency from the network operators. Net neutrality

(56) The AFP reported on this (see : <http://www.telecompaper.com/news/atandt-verizon-take-arcep-decision-to-state-council-880697>).

(57) Interview of R. Rosendaal, Verizon's director of regulatory affairs for Europe, quoted by S. TOMASZCZYK, Verizon, AT&T to file complaint against French IP-peering reporting obligations, in mLex, 20 June 2012.

arguably also requires defining the minimum service Internet users should enjoy. In this sense, net neutrality is linked to the notion of "universal access/service" that was codified in the traditional telecom framework with regard to phone services. Another issue, at the core of the net neutrality debate, involves the establishment of a balanced approach for sharing the costs of the future infrastructure that will ensure a better Internet experience.

A. – How to avoid discrimination between services or traffic ?

Some Internet activists claim that the law should require an equal treatment of all bits circulating on the Internet. But should all bits be treated equally ? This is largely utopian, because the day-to-day management of Internet traffic requires discrimination among the signals, for instance by blocking the viruses, forestalling attacks on sensitive systems, and reducing online spamming. According to a study conducted by ENISA, the European Network and Internet Security Agency, less than 5 % of all email traffic is delivered to mailboxes ; this means that the bulk of mail, 95 %, is spam (58). A basic form of discrimination is thus necessary for a healthy functioning of the Internet. The net neutrality principle, if interpreted literally, conflicts with the goal of efficiency. Indeed, an efficient network requires a basic management of the network to reduce security risks.

Traffic management can result in blocking or throttling, as in the US cases of Madison River (involving the blocking of Voice over IP (VoIP) by an access provider) and Comcast (blocking or slowing-down of peer-to-peer traffic by a cable operator (59)). In those cases, the US Federal Communications Commission intervened and put an end to the abusive conduct of the operators. The fact that those cases are exceptional and that a solution can usually be found quickly, argues against the adoption of specific regulation.

However, most of the time the negative effect of an inadequate traffic control is more insidious and less detectable : the operator accelerates the traffic of some online providers and slows that of others (60). One view is that net neutrality only requires intervention when the practices of an operator have a demonstrable anti-competitive effect, for

(58) See the ENISA study *Spam Survey 2009 - the fight against spam* at <http://www.enisa.europa.eu/media/press-releases/spam-survey-2009-the-fight-against-spam>.

(59) See the presentation of those infamous cases of blocking by Rob Frieden in his contribution in the present book. See also N. CURIEN et W. MAXWELL, *La neutralité d'Internet, La Découverte*, 2011, p. 20 et 22.

(60) See the discussion of the issue in the present book's chapter written by P. LAROCHE.

instance when a traditional telecom operator slows the VoIP traffic to reduce the attraction of Skype that might compete with its own voice services. As already explained, the conditions calling for the involvement of competition authorities are probably too restrictive.

The more complex issue arising from traffic discrimination is whether operators should be allowed, and under which conditions, to offer differentiated "Quality of Services" (QoS) in the context of limited bandwidth. The Internet was based on the best efforts model, meaning that the network does not guarantee that content is delivered or that a user enjoys a minimal QoS level. Today, technological developments allow some packets to be prioritised, such as those for Voice over IP and for online gaming which are more sensitive to time delays. Prioritisation is a form of discrimination which is legitimate, but it could impact the basic service to users and/or the services of other providers. As long as the best efforts service is otherwise ensured, what could prevent a carrier from building networks with priority for certain content ? Even an outspoken partisan of net neutrality like Tim Wu agrees that some discrimination should be allowed for a private network, provided it does not affect the broader network. The verification of this last proviso is of course difficult.

B. – Should net neutrality also include the definition of a minimum or universal service for broadband connectivity ?

Beyond the prohibition of discrimination, net neutrality might require the definition of a minimal level of service that should be guaranteed in all instances. The minimum offer for consumers could go beyond the traditional best efforts principle on which the Internet was built. There are good reasons to define a "universal access/service" requirement as was done for more traditional areas of telecommunications such as fixed telephone. Universal service has commonly been defined with a view to ensure some basic services to all households within a country, including those in rural and remote (high cost) locations. There is a fear that some providers might otherwise "cherry pick" consumers with the greatest capacity to pay or the most profitable regions, leaving less profitable customers and regions underserved or even unserved (61).

(61) In a survey conducted in the fall of 2012 by the European Commission's DG Connect, companies and individuals with a vested interest in broadband policy expressed their unhappiness about the rollout of broadband, in particular in rural areas. (See P. XAVIER, *Universal Access for Telecommunications in a Competitive Environment, Liberalisation and Universal Access to Basic Services*, OECD-World Bank Fifth Services Experts Meeting, 2005, p. 2). DG Connect commissioned studies on this issue, and a final report on "Broadband Availability and

What could be an equivalent to universal access in the Internet context? The issue focus might be on the qualities of the service's delivery rather than on the infrastructure itself. The debate is not ripe and it is probably too early to agree on what could be done, but the issue obviously preoccupies the public (62).

C. – How to ensure a fair share of the costs for the next-generation infrastructure? Should this issue be included in the net neutrality debate?

On the information highways built by the operators, the risk of a toll exists. Therefore, some regulation is needed. At the same time, enough incentive should exist for the network operators to invest in the future infrastructure. Whether this incentive still exists for European telecom operators, or whether the balance is tipped in favour of large Internet companies, such as Google and Facebook, which substantially benefit from the investment of the operators without contributing much remains a tough question. The pressing issue of cost sharing arguably explains why, in a bold move early in 2013, Free, one of France's major Internet providers, blocked online advertisements by installing an ad-blocking system in the latest version of its Internet Freebox (63). Claiming that the ad-blocking policy is not compatible with the free and open Internet, the French government rapidly put pressure on Free which subsequently backed down (64). This episode obviously is linked to the ongoing investigation by the French National Regulatory Authority, ARCEP, into the possible throttling by Free of the video-related traffic generated in particular by YouTube (65).

The issue of cost sharing, which strongly divides network operators and Internet companies, is of a different nature than the debate on discrimination or minimal service: this is more about industrial and innovation policy. Again, this should probably not be left to competition authorities. But it is likewise doubtful that telecommunications

regulators are best placed to tackle this issue. More than the discrimination issue, ruling on cost sharing is a general industrial policy issue. Decisions must be taken at a higher political level. However, the risks of wrong political decisions regarding long-term investments are not minimal, and the market test could offer a better solution. State authorities should refrain from intervening in the area of cost sharing as the risk of policy capture by local economic interests is too high.

There is however a strong caveat in Europe if the solution is left to the market. In reality, the telecoms market in Europe is not unified but fragmented and, in the absence of a true European market, it is less clear that the market force can lead to the best solution for the continent. (Interestingly, this fragmentation prompted the European Commission to initiate talks about telecoms unification and network sharing with the biggest telecoms groups (66)). The new regulation – termed Regulation 2.0 by G. Serentsch, CEO of the Austrian regulator in 2012 – should take into account the double trend: service markets are becoming more global (e.g., Skype); while “*network infrastructure markets are becoming more and more fragmented, as the roll-out of new infrastructure (...) is going to happen regionally*”. Coordination at the EU level through network sharing is badly needed (67). The commissioners in charge of competition and the Digital Agenda should take the lead in addressing this challenge.

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Net neutrality is a complex issue. Laws might be helpful in setting principles and ensuring that fundamental rights are preserved. But it is not enough. The leading rules of a net neutrality framework, such as the transparency and non-discrimination rules, can only be implemented through a dedicated expert body in charge of telecoms. Net neutrality thus requires an effective regulation. In Europe, this regulation involves BEREC and the NRAs. One can hope that those specialised bodies will adequately cooperate to foster net neutrality throughout Europe. For the issue of cost sharing, one should welcome an intervention by those

Affordability” was delivered to the Commission in 2012. It remains to be seen what will come out of this process that aims to ensure broadband connection in the context of universal service.

(62) Study available at http://ec.europa.eu/information_society/newsroom/cf/dae/itemdetail.cfm?item_id=9636.

(63) See “Ad blocking raises alarm among firms like Google”, International Herald Tribune, 7 Jan. 2013.

(64) See “Political pressure forces Free to stop blocking ads”, Financial Times, 9 Jan. 2013 and “France Rejects Plan by Internet Provider to Block Online Ads”, The New York Times, 7 Jan. 2013.

(65) See the 22 Nov. 2012 Decision (Nr 2012-1546) of ARCEP to open an administrative investigation (http://www.arcep.fr/uploads/tx_gsavis/12-1546.pdf).

(66) See the front page article “EU groups in talks on telecoms unification”, Financial Times, 9 Jan. 2013 (“senior industry insiders say it is highly significant that discussion has begun in the telecoms industry, which is balancing a long-term decline in revenues at a critical moment for new investment in next-generation mobile and fibre line access”).

(67) The European Commission seems to favour such coordination. See “EU groups in talks on telecoms unification”, Financial Times, 9 Jan. 2013, *op. cit.*

who can define the best industrial policy for Europe without being tempted to preserve existing actors at national level.

Net neutrality is also an evolving issue. Its initial focus was clearly on the operators of the infrastructure and their management of the Internet traffic. Recently, net neutrality proponents, now followed by some public authorities, have become concerned by the practices of the other players in the Internet ecosystem (68) that can function as "bottlenecks": search engines, providers of operating systems (OS) for mobile phones, operators of online stores for applications, etc. The ongoing investigation of Google's practices by the European Commission, some complaints about leading OS for mobile access to the Internet, and the reaction of the French Minister of digital industry to the unilateral removal of a French start-up from Apple's App Store (69), show that net neutrality now includes what has sometimes been called "search neutrality (70)", "OS neutrality" and "platform neutrality". Net neutrality thus risks bringing new issues to the forefront as the debate moves from the provision of the telecom layer to other layers along the Internet value chain.

THE DEBATE OVER NETWORK NEUTRALITY IN THE UNITED STATES

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As the Internet evolves and matures, it will become an increasingly dominant medium for the delivery of information, communications and entertainment ("ICE"). Increased reliance on the Internet for content delivery shows how ICE technologies and markets have converged.

Broadcasters, cable television operators, telephone companies and other creators and distributors of content no longer need to rely solely on separate media, but can exploit the versatility of a single, nearly ubiquitous broadband medium for the transmission of digital bits. This outcome offers opportunities for everyone to benefit from greater efficiency and operating scale in the creation, distribution and deliver of content to consumers. However, such concentration of resources also increases risks that the few remaining conduit operators will acquire market power and exploit it in ways that thwart or limit competition in the marketplace for both content and its delivery.

Concerns about the potential for anticompetitive practices and disruption of an Internet-mediated marketplace of ideas have prompted advocacy in the United States for well-calibrated government safeguards (1). Advocates for these safeguards use phrases such as network neutrality and open Internet access to summarize the goal of ensuring a free marketplace of ideas and a level competitive playing field unfettered by discriminatory tactics of network operators providing the conduit for the delivery of content. Advocates for government-imposed access safeguards worry

(68) BEREC admits that some stakeholders identify those new components of the net neutrality debate, but BEREC does not intend to address them. See Summary for BEREC position on net neutrality, BoR (12) 146 of Dec. 2012, p. 10.

(69) See note 2 above and Financial Times, 12 April 2013.

(70) See chap. 6 of A. STROWEL, Quand Google défie le droit, De Boeck, 2011, p. 161 and ff.

(1) See, e.g., M. A. LEMLEY & L. LESSIG, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001); T. WU, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH L. 141 (2005); B.D. HERMAN, *Opening Bottlenecks: On Behalf of Mandated Network Neutrality*, 59 FED. COMM. L.J. 103 (Dec. 2006); M. AMMORI, *Beyond Content Neutrality: Understanding Content-Based Promotion of Democratic Speech*, 61 FED. COMM. L.J. 273 (March 2009).