COMMENTS OF VERIZON COMMUNICATIONS

In the French Electronic Communications and Postal Regulatory Authority (ARCEP) Public Consultation on "Discussion Points and Initial Policy Guidelines on Internet and Network Neutrality"

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We are grateful to ARCEP for the opportunity to comment on its consultation document, "Discussion Points and Initial Policy Direction on Internet and Network Neutrality." In late May, we filed comments in response to ARCEP's preliminary consultation on network neutrality-related issues. That preliminary consultation posed seventeen questions – among them, such key questions as:

- What definition would you propose for "Internet access," and do you believe that "managed services" fall within the scope of your answer?
- Do you believe that it is desirable to define what constitutes a "reasonable use" of networks and/or the Internet (excluding the consideration of legal versus illegal uses)?

The present consultation document contains far fewer and much higher-level questions, each of which elicit broadly defined feedback on the numerous definitions, topical discussions, and regulatory proposals raised in the forty-eight page text. As a result, we found it difficult to identify distinct thematic elements within the consultation paper on which our comments could focus for narrative purposes. Although we found this somewhat surprising – for the current consultation to seem far more conceptual than its predecessor – we have endeavored below to provide feedback on the text within the question areas posed.

Although we agree with many points raised in the paper – particularly with regard to the text's emphasis on the key role for meaningful transparency – we find that the consultation paper contains several contradictions that render several concepts, definitions and proposed 'directions' troubling. For instance, whereas the opening segments of the paper seem to recognize and champion the importance of reasonable network management to a well-functioning Internet, discrete sections of the paper deny this importance by proposing blanket prohibitions on particular forms of network management, such as blanket prohibition on "discrimination." In addition, several recommendations in the text, including those recommending that minimum quality levels be set immediately, seem to presume the need for regulatory action without discussion of any observed activity which might otherwise support intervention.

We recognize that a principal role for this consultation is to give context to implementation of several key provisions of the revised Electronic Communications Regulatory Framework – particularly elements of the Universal Service Directive. However, that text, as discussed in greater detail below, does not support either the blanket prohibitions or calls for immediate action recommended below. Again, these contradictions may be unintentional, but at present their existence is among several related problems that render it difficult to properly evaluate the text's recommendations.

In addition, the consultation text attempts to broadly define "managed services" in such a way as to seemingly be inclusive of both enterprise and certain types of consumer servoces. Perhaps this is an attempt to create a broad 'zone of exception', from which certain "managed services" would be exempted from rules to apply to network management practices. However, both the purpose for the designation and the limits of its scope are unclear. Indeed, as we discuss in greater detail below, attempts to define "managed services" in the context of network neutrality-related concerns is not only unnecessary but also likely to prove ill-suited to keep pace with the constant innovation occurring in the enterprise service space, where the customer most often contracts for specific levels of quality. Even outside of the enterprise space, any provider that offers a traditional broadband Internet access service should be free to offer consumers the choice of any additional managed or otherwise differentiated services.

Question 1: The Authority invites players to comment on its proposed definitions.

- ***Openness and ARCEP's Three Goals:***

In considering issues of 'Internet openness,' we applaud ARCEP's intention to take into account actors in "the entire value chain." Far too often, participants in this debate have focused purely on what they see as a duty for network operators, whereas all participants in the Internet economy clearly have active stakes and roles to play in preserving an open Internet. As we wrote with Google in our joint filing to the U.S. FCC on 14 January 2010:

> It is essential that the Internet remains an unrestricted and open platform, where people can access the lawful content, services, and applications of their choice. These are the core values underlying the FCC's existing wireline principles, and all providers in the Internet ecosystem should act in accordance with these values. To us, this means that when a person accesses the Internet, he or she should be able to connect with any other person that he or she wants to -- and that other person should be able to receive his or her message. An open Internet also is one in which no central authority can impose rules that limit or prescribe the services that are being made available, where an entrepreneur with a big idea can launch his or her service online with a potential audience of billions, and where anyone, including network providers, are able to innovate without permission and provide any applications or services of their choosing, either on their own or in collaboration with others.[1]

[1] See Google and Verizon Joint Submission on the Open Internet, in FCC Dkt. 09-191, WC Dkt. 07-52 (Jan. 14, 2010), at: http://www.scribd.com/doc/25258470/Google-and-Verizon-Joint-Submission-on-the-Open-Internet.

While we concur with the inclusive nature of 'Internet openness', we believe that the stated goal advanced on page five of the consultation – that users should be provided "with access to all the content, applications and services carried over a network … in a non-discriminatory fashion" – is too broad. Indeed, even many proponents of net neutrality regulation concede that many forms of discrimination – such as blocking traffic that could harm networks and users or providing enhanced quality-of-service to latency-sensitive applications – are beneficial. Moreover, all forms of differentiated arrangements "discriminate," but such arrangements are commonplace in competitive sectors throughout the economy and are generally pro-competitive beneficial to consumers.

While network architectures differ, all networks are designed on a premise of shared bandwidth with capacity limits. Each network employs management tools that are the products of continuous technical innovation by network operators, engineers and equipment manufacturers. Various tools and practices may prioritize traffic on networks and, by their very nature, may therefore 'discriminate' among the various bits that make up typical Internet traffic. But this form of discrimination is essential to the proper Internet traffic management in much the same way as traffic signals at intersections in a busy city center necessarily discriminate momentarily in the interest of a better overall flow of vehicle traffic. Such discrimination occurs according to source, destination, or type of application, in order to provide quality service, not to detract from the user's experience or ability to access lawful content. [2]

It is for this reason that revision of the European Electronic Communications Regulatory Framework (the "Framework") highlighted in relevant part that "discriminatory" treatment is not necessarily indicative of anti-competitive behavior:

> Those procedures should be subject to scrutiny by the national regulatory authority acting in accordance with the provisions of the Framework Directive and the Specific Directives and in particular by addressing discriminatory behaviour, in order to ensure they do not restrict competition.[3]

This interpretation is consistent with other elements in the Framework that recognize many forms of discriminatory behavior can be pro-competitive.[4] For these reasons, the present phrasing of the goal is too broad, giving rise to the implication that the vast majority of otherwise acceptable network management applications on networks would be interpreted as *per se* anti-competitive and unacceptable. We do not believe that this is the intended meaning of the goal, but we encourage clarification on this important point to specifically allow network and traffic management practices.

- "Extreme" Scenarios and the Importance of Transparency

The ARCEP text also errs by assuming, without factual support, the existence of problems and ignoring the potential unintended consequences of proposed solutions. For example, one of the "extreme scenarios" cited on page seven of the ARCEP text posits that

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[2] It perhaps goes without saying, but access to content should, in our view, be slightly but importantly qualified as access to "lawful" content in the standard for openness.

[3] See Directive on Universal Service and Users' Rights Relating to Electronic Communications Networks and Services [*hereinafter* "Universal Service Directive"], O.J. L 337, 18.12.2009, at 15 (Recital 34).

[4] See, e.g., Commission Guidelines on Market Assessment and Significant Market Power under the Community Regulatory Framework for Electronic Communications Services, O.J. C 165, 11.7.2002, at 12 (discussing differentiated pricing, product substitutability and user demand in an otherwise competitive market).

"complete freedom in traffic management practices, which can lead to discriminatory and anti-competitive practices," could "threaten the model of openness, universality and freedom of expression" on the Internet. This statement seems to be based on unfounded presumptions concerning the need for regulation to prevent anticompetitive network management practices. The first presumption seems to be that transparency (regarding network management practices) and the existence of a competitive market will not alone be sufficient to check the potential anti-competitive use by a market actor of traffic management tools. A second and related presumption would be that the power of ARCEP to address anti-competitive conduct, when or if it occurs in the market, is insufficient in this context absent specific limitations on the scope of acceptable traffic management practices. We believe both presumptions are without foundation.

Contrary to both presumptions, there is no record of an accumulation of incidents where network management practices have harmed users. We are not aware of any difficulties in Europe – or for that matter, even rumors of difficulties – related to network management practices, a key (but hypothetical) concern often raised in support of "net neutrality" regulation. The absence of supporting evidence is in line with our experience in the U.S. as well. Indeed, the vast majority of "concerns" raised in the context of "net neutrality" are purely theoretical and have not manifested themselves in the marketplace.

This absence of bad practices in the marketplace is not surprising. Stated simply, providers are disciplined by the competitive market, and the need to retain and add customers by responding to consumer demand is a critical market reality that prevents anticompetitive practices that are harmful to consumers. For instance, in mid-2009, a customer survey found that an Internet service provider that restricted or limited the use of Internet services or applications would lose more than a quarter of its customers to competitors,[5] a conclusion that underscores the fierce competition in European broadband markets. Moreover, even if market forces were insufficient to deter harmful conduct, existing law is in place and to address any anticompetitive practices that may arise. EU sector-specific rules and competition law will either prevent or severely sanction any such behavior.

In the context of implementing the provisions of the revised Electronic Communications Regulatory Framework, particularly provisions in the revised Universal Service and Framework Directives, it is important also to recognize that certain new powers anticipate observed activity in the marketplace before they are utilized. This is particularly true of Article 22 of the revised Universal Service Directive, which highlights the power of National Regulatory Authorities (NRAs) to set minimum quality of service standards not as an anticipatory rule but in response to an observed deficiency in an otherwise competitive market. Although the ARCEP text, at page twelve, cites a "danger of increased violation of the principle of net neutrality," we are unaware of any evidence presented in the context of the Framework review or subsequently that would objectively support this claim of a "violation" or danger of its "increase."

While the text seems to place great emphasis on assumed problems, without development of evidence that these concerns are manifest in the marketplace, little attention in the text is paid to efforts already underway to assuage concerns before they potentially become real issues.[6] Among these efforts are initiatives to increase meaningful transparency.

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[5] Number of consumers who would switch to another ISP with either the same or higher prices, in Synovate, "Consumer expectations of the Internet", research done on behalf of Skype, Google and Yahoo.

[6] See, e.g., Ensuring Network Stability and Consumer Confidence in Competitive Markets (16 Feb. 2009), p1, at: http://www.cableeurope.eu/index.php?mact=Publications,cntnt01,details,0&cntnt01documentid=113&cntnt01returnid=74.

To the extent there are concerns about anti-competitive behaviour, such concerns can be proactively addressed through greater transparency and the establishment of industry best practices and guidelines for network management practices. Indeed, in the comments that have been filed in response to the FCC's NRPM, including the most recent reply comments filed on April 26th, virtually all commenters have been in agreement that greater transparency would benefit consumers. Transparency also alleviates the need for regulation. We, and many other parties, suggested that the FCC encourage self-governance efforts, as described below, to develop practices and standards for transparency, rather than adopting new transparency regulation or other regulation restricting providers' practices.[7] An increased and comprehensive focus on transparency, included in promoting the creation and adoption of best practices and guidelines by industry, would be fundamental to enable well-informed consumer choices under the principles outlined above.

As Verizon wrote to the FCC, providers typically already disclose key terms and conditions related to use of their services. A highly competitive market for broadband services – as exists in Europe and the US – means that providers have a strong incentive to develop and maintain a reputation for treating customers fairly – which includes providing clear and accurate information that is material to consumers in choosing what products and services to purchase.[8] In contrast, regulatory prescription about what disclosures are required limits providers' flexibility to respond to consumer feedback and their ability to tailor their disclosures to provide information in the manner that is most meaningful and relevant to consumers.

A focus on informed consumer choice furthered by industry best practices also will help deter providers from adopting network management or other practices that are anticompetitive and harm consumers. The notion that providers are disciplined by the competitive market, and the need to retain and add customers by responding to consumer demand, has proven to be true in this context as well. For instance, as discussed in the FCC's NPRM, in both the *Comcast* and *Madison River* examples to which the FCC had referred, the provider failed adequately to disclose that it was blocking specific applications desired by certain users. Once these practices were disclosed, the providers ceased or altered their practices.[9] Thus, to the extent a "problem" existed at all, increased transparency addressed it.

Importantly, the need for transparency applies to providers throughout the broadband ecosystem – to providers of networks, applications, content and devices alike. Thus, for example, application and content providers should be expected to disclose practices that may affect a consumer's use of the Internet (or the use of the Internet by other consumers). For example, an application provider should disclose the fact that its application "hogs" bandwidth and may degrade a user's ability to simultaneously use another service or that it consumes a significant portion of a consumer's bandwidth. Likewise, a search engine should disclose the fact that its algorithms block particular types of content or applications – a practice that can clearly implicate a user's ability to access lawful content and applications. The Internet is by definition an interconnected network of

[7] See Preserving an Open Internet: Summary of Verizon's Reply Comments on the FCC's Net Neutrality Notice of Proposed Rulemaking, in FCC Dkt. 09-191, WC Dkt. 07-52 (Apr. 26, 2010), at 3.

[8] See Comments of Verizon and Verizon Wireless, in "in the Matter of Preserving the Open Internet and Broadband Industry Practices" [hereinafter "Verizon Comments"], FCC GN Dkt. 09-191, WC Dkt. 07-52 (14 Jan. 2010), at 50.

[9] See id. The FCC's NPRM pointed only to two isolated instances on the wireline side: an incident in which a small rural telephone company, Madison River, tried to block users from placing VoIP calls over their DSL connections, and a case in which Comcast degraded BitTorrent P2P traffic.

networks, and this inter-dependent relationship extends to the applications and software that power the tools consumers use every day.

In addition to increased transparency, among the initiatives given little attention in the ARCEP text are collaborative industry efforts to address challenges and resolve disputes as they arise, to which the presence of a government can act as a backstop to address bad actors that harm competition and consumers and that are not effectively handled through these self-governance efforts. A number of the comments filed in response to the FCC's NPRM, including Verizon and Google in their joint filing,[10] noted that the Internet has thrived in part because of its model of self-governance and industry collaboration, guided by expert bodies such as the Internet Engineering Task Force. In this spirit, our joint filing proposed a process to develop standards for dealing with bad actors on the Internet, including the creation of a "Technical Advisory Group," or TAG, to help discipline the industry, resolve disputes without the necessity of government intervention, and serve as an advisor for policymakers. Comprised of technical experts from a wide array of interests and sectors, one of the TAG's primary roles would be to set the norms of behavior and operation that will continue to preserve and protect the Internet. It would also provide a forum for resolving disputes short of government involvement. TAGs also provide guidance on specific issues and help develop best practices and standards. For all these reasons, TAGs should be encouraged.

These also were among the aims of the Broadband Internet Technical Advisory Group (BITAG), launched on 9 June 2010, a collaborative industry effort to develop consensus on broadband network management practices or other related technical issues that can affect users' Internet experiences. The intention is that the BITAG promote organized, forward-looking discussion, driven by key stakeholders, and that it also provide opportunities to educate and inform policy makers on underlying technical issues from the perspectives of diverse stakeholders. While the BITAG is initially constructed as a U.S.-centric activity, it is the group's expectation that the model could yield far broader results.[11]

- ***"Managed Services"***

Given the increasing and evolving uses of broadband networks and services, consumers stand to benefit from managed services that providers may offer. As discussed in our comments on the preliminary ARCEP consultation questions issued in April, we feel that the definition of "managed services" provided on pages eight through nine does not accurately reflect the services that we typically deliver. For instance, the proposed ARCEP managed services definition does not seem to acknowledge inclusion of services provided on the public Internet. As we commented to the FCC in the context of its Net Neutrality Notice of Proposed Rulemaking (NPRM) in the U.S. on Monday, April 26th:

> The dividing line between Internet access and "managed services" is becoming increasingly blurred as more and more services integrate content or features from the

[10] See Google and Verizon Joint Submission on the Open Internet, in FCC Dkt. 09-191, WC Dkt. 07-52 (Jan. 14, 2010), at: http://www.scribd.com/doc/25258470/Google-and-Verizon-Joint-Submission-on-the-Open-Internet.

[11] See Initial Plans for Broadband Internet Technical Advisory Group Announced, PR Newswire (9 June 2010), at: http://www.prnewswire.com/news-releases/initial-plans-for-broadband-internet-technical-advisory-group-announced-95950709.html. Initial responses to this initiative have been enthusiastic, including a statement of support from the ISOC-North American bureau. See http://www.isoc-ny.org/?p=1602. See also McSlarrow, Kyle, Introducing the Broadband Internet Technical Advisory Group, CableTechTalk (1 July 2010), at: http://www.cabletechtalk.com/broadband/2010/06/09/introducing-the-broadband-internet-technical-advisory-group/.

> Internet or connect directly or through a proxy with the Internet. Any attempt to define a fixed category of permissible services inevitably will create ambiguities and limit development of innovative new services that do not fit neatly within any definition adopted today. Such innovations, of course, benefit consumers by offering them even more choices.[12]

In its NPRM, the FCC had proposed to define "broadband Internet access service" as the provision of IP data transmission between an end user and any "endpoints reachable, directly or through a proxy, via a globally unique Internet address assigned by the Internet Assigned Numbers Authority."[13] In our comments, we took issue with this broad definition, stating:

> "[S]ome services that clearly should be deemed "managed" or "specialized," including many private network offerings, would appear to fall within that definition. For example, many VoIP services used by enterprise customers draw on public IP addresses. And, as noted above, more and more services increasingly integrate selected content or features from the Internet (e.g., the 'Widgets' component of Verizon's FiOS FTTH service, which allows users to access certain endpoints such as Facebook that are reachable using the Internet). There is no basis to impose the proposed regulations on these services just because they draw in part of specific content or features from the Internet or just happen to involve the use of a public IP address.
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> That is particularly true with respect to private IP services provided to enterprise customers that allow them to deliver data over Verizon's IP network with the flexibility to control the priority and security afforded that traffic. Because such services are distinct from Internet access services (even if some customers may also incidentally use their private network to access content on the public Internet), they, and other services sold to business customers, have not been considered subject to the Commission's wireline broadband principles or been the focus of debates concerning "net neutrality," and these offerings presumably would not be affected by the Commission's proposed rules. Indeed, it would make little sense to impose requirements about access to all content and applications on the public Internet or "nondiscrimination" when customers of such services are not intending to purchase undifferentiated access to the public Internet."[14]

For instance, most of our corporate customers seek services on our private IP (PIP) network, which is distinct from the Public Internet. Services such as PIP involve proprietary networks and a high degree of traffic management, often at the customer's direction. These services clearly should fall within any "managed services" exception to the powers envisaged in the revised Universal Service Directive's Recital 34, and particularly, the application of Article 22(3) powers to set minimum quality levels for network transmission services which are critical to large business customers.[15] However, as discussed above, it is also true that many corporate customers purchase and use what might be termed as traditional 'Internet access,' for instance, as a component of our Verizon Secure Gateway mobility offering. Such services utilize the Public Internet, but do so in a secure manner with

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[12] See Comments of Verizon and Verizon Wireless, in "in the Matter of Preserving the Open Internet and Broadband Industry Practices" [hereinafter "Verizon Comments"], FCC GN Dkt. 09-191, WC Dkt. 07-52 (14 Jan. 2010).

[13] See in the matter of Preserving the Open Internet and Broadband Industry Practices, FCC NPRM, GN Dkt. 09-191, WC Dkt. 07-52 (Oct. 22, 2009), Appendix A, § 8.3, at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-93A1.pdf.

[14] See Verizon Comments, supra note 12, at 77-78.

[15] Directive 2009/136/EC, on Universal Service and Users' Rights relating to Electronic Communications Networks and Services, amending Directive 2002/22/EC, O.J. vol. 52, L 337/11 et seq. [Universal Service Directive].

quality of service requirements that are not only transparent, but also very often dictated by the customer.

Although the lines as to what is or is not an 'Internet access' service are increasingly blurred, the above example help illustrate that network neutrality-related powers, however relevant some may consider them to be in the context of *consumer* services, would be wholly inappropriate to apply in the context of *enterprise* service delivery. Given the present drive to implement the revised European Electronic Communications Regulatory Framework into national laws, this distinction is particularly relevant.

As we recommended to the FCC in the context of the NPRM, rather than trying to define or predetermine a fixed category of "permissible" services in some static or artificial way, it would be more appropriate to emphasize transparency, and to make clear that any provider that offers traditional Internet access that allows consumers to access any lawful content and applications also is free to offer consumers the option of purchasing any other services that the provider chooses to provide, including any type of managed or otherwise differentiated service.[16] This would not only preserve consumer choice, but would also be a vastly more preferable alternative to having an NRA attempt to set or define what is or is not a permissible "managed service" in the course of exercising power pursuant to the Universal Service Directive.

Question 2: The Authority invites players to comment on its presentation of the background and issues surrounding Internet and network neutrality.

In discussing the scope of "net neutrality" as a global debate, the paper makes several incorrect statements concerning both the regulation of broadband Internet access services and more generally about the status of broadband competition in the United States. In a segment of the paper that begins at page nine, the ARCEP text begins with a faulty premise. It states that the "original context of the debate over network neutrality" emerged at a time when "broadband services had already been removed from the scope of the sector's regulation" in the U.S. This is incorrect. Broadband Internet access services have *never* been treated as regulated, common carriage services under Title II of the Communications Act in the U.S. In enacting the 1996 Telecommunications Act, Congress intentionally excluded Internet services, like broadband Internet access, from the scope of traditional regulatory burdens (embodied in Title II of the Communications Act) that applied to telecommunications services. Congress and the FCC – with the U.S. Supreme Court affirming the critical FCC ruling – have a long history of distinguishing broadband Internet access services – which inherently involves the processing of information – from traditional telecommunications services involving pure transmission. The FCC has consistently refrained from applying traditional common carriage regulation to Internet access services.

The paper also misstates the status of broadband competition in the United States. At page twenty-four, the ARCEP text posits that the U.S. broadband market "is a de

[16] See Verizon Comments, supra note 12, at 78. Several other commenters in the U.S. proceeding, who were otherwise equivocal on the issue of whether network neutrality rules are necessary, agreed with the need for caution, particularly in the context of enterprise services provision:

> "As it considers adopting new regulations in this area, the Commission [FCC] should mitigate any potential negative effects of such regulations on Internet innovation, development, and investment. The Commission should adopt any such regulations only for providers of broadband Internet access services, and it should not seek to regulate enterprise services, including those provided by Akamai, that do not "supplant or otherwise negatively affect" the public Internet."

E.g., Comments of Akamai Technologies, Inc., in FCC GN Dkt. 09-191, 07-52 (Jan. 14, 2010), at 18, at: http://fjallfoss.fcc.gov/ecfs/document/view?id=7020376186.

facto monopoly or, at best, a duopoly," suggesting that the need for application of net neutrality rules is of greater relevance in the U.S. market. This assertion was preceded in the text by a statement at page fifteen that "the state of fixed network competition appears to be much healthier in Europe, notably in France, than in the United States." This is not the case. The broadband marketplace in the United States is marked by intense, intermodal competition and high levels of investment and innovation. Traditional telephone companies and cable providers have long engaged, and continue to engage, in fierce competition in the U.S. to retain existing wireline subscribers and gain new ones. Moreover, these providers are investing heavily in next-generation networks and technologies such as fiber-to-the-premises and DOCSIS 3.0. In addition, 3G wireless broadband has already become nearly ubiquitous and quite popular, and 4G services – enabling much faster data transmission speeds – are coming soon from multiple different competitors.

The evidence in support of these points is compelling. First, broadband companies in the U.S. have made massive investments in their networks, with the result that cable modem services are available to 92 percent of all U.S. households and DSL to 83 percent.[17] The FCC's recent High-Speed Internet Services Report indicates that, at a minimum, 87.1% of all census tracts have both a cable modem and a DSL provider.[18] These providers are now pouring billions of investment dollars into upgrading these networks. Verizon alone is investing more than $23 billion to pass 18 million premises with its next-generation, all-fiber FiOS network by the end of this year, and has already passed more than 14.5 million of those premises.[19] Other companies such as AT&T and Qwest also are deploying fiber-based broadband services to millions of households.[20] Each of the major cable operators is upgrading its network to DOCSIS 3.0 technology, with most upgrades already between 66 and 100 percent complete.[21] According to the FCC, wireline broadband providers made a staggering $48 billion in capital expenditures in 2008 and another $40 billion in 2009, with broadband-specific investments of $20 billion in 2008 and $18 billion in 2009.[22]

Broadband providers in the U.S. are making these multibillion dollar investments as a result of competitive pressures and the real risk that they will lose subscribers to rivals if they don't keep pace with the competition. Investment by one competitor breeds investment by another. Time Warner, for example, recently acknowledged that it is upgrading to DOCSIS 3.0 in a targeted way in direct response to Verizon's deployment of FiOS.[23] As the FCC recognizes in its Broadband Plan, "competition appears to have induced broadband providers to invest in network upgrades."[24]

Second, even as consumers have benefited from the higher speeds and greater capabilities of these networks, prices (particularly on a per megabit basis) have been *falling* over time – a result wholly at odds with the "cozy duopoly" caricature drawn by some

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[17] Verizon Comments, supra note 12, Topper Decl. ¶¶ 9, 11.

[18] See Reply Comments of Verizon Communications on the FCC's Net Neutrality Notice of Proposed Rulemaking, in FCC Dkt. 09-191, WC Dkt. 07-52 (Apr. 26, 2010) [hereinafter "Verizon Reply Comments"], Topper Reply Decl. ¶ 19.)

[19] Verizon Comments, supra note 12, Topper Decl. ¶ 25.

[20] See id. ¶¶ 26-27.

[21] Id. ¶¶ 30-31.

[22] Federal Communications Commission, Connecting America: the National Broadband Plan (March 2010) [hereinafter National Broadband Plan], at 38, available at: http://download.broadband.gov/plan/national-broadband-plan.pdf.

[23] TWC - Time Warner Cable, Inc. at Morgan Stanley Technology, Media & Telecom Conference at 11-12 (Mar. 1, 2010); *see also id.* at 7 ("I would say that there are going to be times where we [Time Warner and Verizon] trade innovative product sets back and forth. Something -- one day I will have something that they don't have and vice versa.").

[24] National Broadband Plan, supra note 12, at 38.

regulatory critics of the U.S. market.[25]

Third, telephone and cable companies have been engaged in aggressive marketing campaigns, including deep discounts and special offers as a way to attract new subscribers. The advertisements on both sides regularly compare the provider's own service to those of competitors in terms of bandwidth capacity, features and price.[26] Such aggressive marketing tactics would make no sense in the absence of a highly competitive marketplace.

Fourth, vibrant competition is evident from the considerable and rising subscriber churn rates among wireline broadband providers.[27] For example, Comcast reports that 65% of its new subscribers are switching from other Internet service providers.[28] According to one prominent analyst, cable broadband providers have experienced monthly churn rates of between 2.4 percent and 3.0 percent, equating to annualized churn rates of between 28.8 percent and 36 percent.[29]

In addition to many of the fixed broadband options used today by the average user in the U.S.,[30] wireless providers are investing heavily in 4G services – which will offer speeds and capabilities that will make them an effective competitive alternative for many users – and have begun deploying them. In 2008, Verizon Wireless invested over $9 billion for spectrum in the 700 MHz auction, and it will initiate commercial LTE service with coverage to approximately 100 million people in up to 30 markets during this year, with nationwide build out expected by the end of 2013.[31] AT&T will be starting LTE trials in this year, with commercial deployment beginning in 2011.[32] Sprint has recently brought 4G to 27 markets and plans to bring service to multiple additional markets during this year.[33] Clearwire has launched 4G service in at least 27 markets with over 34 million people and plans to cover 120 million people in 80 markets by the end of this year.[34] Cable companies such as Comcast and Time Warner have already begun to resell Clearwire's 4G service in 16 markets.[35] Regional providers are also upgrading – MetroPCS, for example, plans to begin deployment of its LTE network in the second half of this year.[36]

Wireless providers already are advertising their 4G services as wireline replacements. Clearwire, for example, advertises its 4G WiMAX service as "a wireless alternative to DSL or cable internet service," and one of its officers recently noted that "roughly half the customers come on and use it [Clearwire's services] as a – overall as a replacement to whatever it is that they were having before, which is a combination usually of DSL or cable broadband."[37] The Department of Justice has stated that "[e]merging fourth

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[25] Verizon Comments, supra note 12, Topper Decl. ¶¶ 35-36.

[26] See id., Topper Decl. ¶¶ 42-43.

[27] Id. ¶ 20.

[28] See Comments of Comcast in "in the Matter of Preserving the Open Internet and Broadband Industry Practices" [hereinafter "Verizon Comments"], FCC GN Dkt. 09-191, WC Dkt. 07-52 (14 Jan. 2010), at 20.

[29] See Craig Moffett *et al.*, Bernstein Research, Broadband: Are We Reaching Saturation?, at 4, Ex. 2 (Aug. 14, 2007).

[30] Verizon Reply Comments, supra note 18, Topper Reply Decl. ¶ 13; Marguerite Reardon, *Verizon Expects 4G Launch Next Year*, cnet reviews, Feb. 18, 2009 ("In its initial trials, Verizon says that it has demonstrated peak download speeds of around 50Mbps to 60Mbps."), available at http://reviews.cnet.com/8301-13970_7-10166622-78.html.

[31] Verizon Comments, supra note 12, Topper Decl. ¶ 65.

[32] Id. ¶ 66.

[33] Verizon Reply Comments, supra note 18, Topper Reply Decl. ¶ 6.

[34] Id.

[35] Id.

[36] Verizon Comments, supra note 12, Topper Decl. ¶ 71.

[37] Verizon Reply Comments, supra note 18, Topper Reply Decl. ¶¶ 14,16.

generation ("4G") services may well provide an alternative sufficient to lead a significant set of customers to elect a wireless rather than wireline broadband service."[38] As with voice telephony, in which wireless services initially were a complement to wireline services but have now become a common replacement as increasing numbers of consumers "cut the cord," the rollout of 4G will make wireless broadband a clear competitive alternative to wireline service and force those wireline providers to respond in terms of price, capabilities or other attributes to counter the advantage of mobility.

In light of the overwhelming evidence to the contrary, it is not surprising that proponents of the net neutrality rules proposed in the FCC's NPRM offered no facts or data in their comments that would even begin to support a finding that the broadband marketplace is not fully competitive. Instead, they argue that the supposed presence of "only" two wireline competitors demands regulatory intervention. The argument is wholly without merit: strong intermodal competition plainly exists in the U.S. broadband market and consumers are benefitting from it. Their claim is rendered all the more specious when one considers the emergence of fixed and mobile wireless broadband services that, particularly with the deployment of 4G networks, provide increasing cross-platform competition.

In the end, the critics of the U.S. market who use the "duopoly" reference derisively are unable to show the same or better comparative depth of platform competition in their own markets as that which is available in the U.S. Only 42% of U.S. broadband subscribers rely on DSL for their broadband, and the vast majority of foreign markets don't have nearly the depth of options (including cable, fiber, mobile and satellite) available to consumers in the U.S.[39] Critics of the U.S. market also often choose to ignore the remarkable successes in terms of price, deployment and take-up in the U.S., including the following:

- The U.S., Canada and Mexico have connected 27% more users with fiber than all of the countries in West, Central and Eastern Europe combined.[40] Verizon alone has deployed more fiber-to-the-premises lines than all of the providers in the EU.[41]
- Over 67% of American households take-up broadband – far higher than the average for Europe.[42]
- The ITU ranks the U.S. 4th in average broadband price, behind Macao, Israel and Hong Kong.[43]
- Average minutes of use of mobile devices in the U.S. are the highest globally – 842 per month, whereas the average across Western Europe is 180 per month (a high of 314 in Asia – South Korea).[44]

[38] See Ex parte submission of the Dept. of Justice, GN Dkt. No. 09-51, 8 (filed 4 Jan. 2010).

[39] See OECD Communications Outlook 2009 (for DSL and cable penetration); OfCom International Telecommunications Market Report, statistical abstract (Dec. 2009), at 63 (measure of platform competition, select countries).

[40] IDATE, FTTx 2010: Markets and Trends, Facts and Figures (March 2010, figures through mid-2009), at 4.

[41] Comments of Verizon and Verizon Wireless on a National Broadband Plan (8 June 2009), at 22 n.20.

[42] See Connecting America: Nat'l Broadband Plan (Mar. 2010) at 3 & n.5; OECD Broadband Statistics, Households with Broadband Access (Nov. 2008); European Commission, DG-Information Society, "E-communications Household Survey" (June 2008), at 54.

[43] ITU, Measuring the Info. Society 2010, at 72, 4.9. The U.S. rank of fourth is based upon the average broadband price and its percentage of the average U.S. consumer's budget.

[44] CTIA, written ex parte communication (FCC GN Dkt. 09-51) (12 May 2009) (applying year-end 2008 data of Merrill Lynch).

- The take-up of mobile Internet by users is roughly 15.6% of all U.S. subscribers, whereas it's 13% in the U.K., 12% in Italy, 9.6% in France, and 7.4% in Germany (the largest European markets).[45]
- U.S. mobile customers pay 60% less per minute than the average among the top 25 OECD markets.[46]

For all these reasons, we strongly disagree with the characterizations of the U.S. broadband market as a duopoly and with any conclusion that the market structure there has lead to any market failures. In fact, as the above data makes clear, quite the opposite is true.

In addition to representations concerning the status of broadband in the United States, and the relevance of this inaccurate depiction to the domestic U.S. debate of net neutrality-related issues, ARCEP's paper also inaccurately describes aspects of broadband in certain other countries in the context of their respective consultations regarding network management. While we would agree with much of ARCEP's characterization on page 10 of the approaches taken by Japan and Canada to the issue of network management (both countries seem to take a very deliberative and cautious approach, emphasizing a need to provide operators "leeway" in this area), we disagree with the notion that either country's approach required such a broad notion of "non-discrimination" to "ensure that consumers have the freest possible access to the Internet." Neither the Ministry of Internal Affairs and Communications (MIC) in Japan nor the Canada Radio-television and Telecommunications Commission (CRTC) proceedings concluded that such a broadly-applicable prohibition of discriminatory treatment of network traffic would be appropriate to address net neutrality-related concerns or broadband service quality generally.

Question 3: The Authority invites players to comment on its general approach to the terms and conditions governing Internet access.

The general approach set out by ARCEP would undermine needed flexibility, thus preventing providers from effectively managing their networks and offering useful services to consumers. At page fifteen, ARCEP proposes "strict supervision of the 'authorised' traffic management practices." This approach assumes a nonexistent problem, and risks denying providers the flexibility that they need to manage their networks effectively, address evolving challenges and threats in real time, and ultimately to better serve their subscribers. It also appears to suggest that traffic management practices will be limited by regulation to a finite list – a fact that would seem to contradict the text's earlier discussion of the need for network management tools to facilitate quality service. The notion of whether the use of traffic management techniques must be pre-cleared against a pre-determined list is unclear, and because of that, the statement is quite troubling.

The Internet has grown and developed in an open environment characterized by competition, cooperation and adaptation. Many of the so-called net neutrality-related concerns regarding network management tools simply ignore the fact that operators today already operate in a highly competitive environment. In this environment, it is uncertain which new and innovative services will succeed. Customer choice and quality of service are keys to the survival of market participants. But in an environment of scarce capacity – particularly as broadband is put to more and varied uses – it is not possible or desirable to

[45] FCC, Commercial Mobile Radio Service (CMRS) Report (2009), at 10.

[46] CTIA, written ex parte communication (FCC GN Dkt. 09-51) (12 May 2009), at 1,3.

limit providers' flexibility by itemizing a list of favored and disfavored practices. Consumers will be best served by having multiple broadband platforms competing, with a wide range of business models and services that differentiate competitors. That's why policies encouraging broadband deployment and market-based solutions have been so successful to this point, and will continue to be the best way to ensure that the Internet continues to evolve and thrive. Limiting network management practices to a pre-approved list would stifle the innovation that today is so critical to continued maintenance of service quality, security and consumer choice in services.

The notion of a finite list is rendered even more problematic by the text's assertion at page seventeen as follows:

> Above all, this means that the general rule for Internet access is not to differentiate how each individual data stream is treated, whether according to the type of application/service/content or to the stream's transmission or reception address. This must apply to all points along the network, including points of interconnection.

Here again, the ARCEP text suggests that providers' hands could be tied in effectively managing their networks, and that they would be denied the flexibility they need to respond in real time to new threats or to otherwise quickly take steps to better serve their customers. The result will reduce flexibility and experimentation, deter the development and use of innovative practices, and render operators ineffective at handling new security threats and rapidly changing conditions. Network providers must have maximum flexibility to determine the best way to address the ever-changing array of security threats, evolution in traffic patterns, and other changes in network use. This is all especially true in the case of wireless broadband services, where the technology is evolving with the deployment of 4G networks, and no one can know how such networks will be used and what security threats will emerge. Consumers will benefit most if network operators have wide latitude to innovate and adopt the best possible techniques to make networks secure and operate most efficiently. Application of this general rule eliminates the possibility that network management techniques could be applied for any reason on a network.

This general rule set out in the ARCEP text is followed by the introduction of five principles. Of these five, "relevance" and "effectiveness" are particularly difficult to understand in terms of how they would be applied. For instance, the "relevance" principle would seem to permit the application of network management tools to facilitate a tiered level of service for Customer A as long as accomplishing such level of service would not adversely impact Customer B or, for that matter, any other data streams. However, the principle's example focuses on application of network management to "avoid congestion (when a gander has been proven)." Proven how? To and by whom? Would this "proof" eliminate the possibility that technical measures could be deployed in a timely fashion? The scope of "relevance" is presently at best unclear and seemingly overbroad in term of type of network management that it might limit.

The notion of whether the "relevance" principle would or would not permit an operator to provide differentiated service is made further confusing by a brief discussion on page nineteen, where the text states that "quality of service" means to "avoid degradation … in a satisfactory way for the maximum number of users." This would seemingly require that all internet users be served with an equal and equivalent level of service – eliminating the

possibility that an operator could offer differentiated services or multiple levels of service. This makes little sense in today's broadband marketplace.

Further, it is unclear what is meant by the "effectiveness" principle, which states that an 'effective' measure "must produce the hoped-for effects, by eliminating collateral damage as much as possible (e.g., in terms of data security) and any harmful technical and economic incentives." Does this mean that an "effective" network management measure must achieve its "relevant" goal without impacting other streams? If so, this concept seems to be covered under the notion of relevance. If, by "effective" the Authority means that a network management tool cannot be applied unless it is certain to achieve its desired goal, then it may be misunderstanding the degree to which network management tools are iterative products of continuous innovation.

As these questions suggest, the proposed approach would create significant uncertainty that could deny providers' needed flexibility in the way that they manage their networks and offer their services, and that this uncertainty could harm their users. Rather than going down the path of prescriptive rules concerning network management – rules that could never keep pace with changes in technology and the evolving challenges faced by providers – ARCEP instead should encourage industry-led efforts that can consider these complicated issues, craft appropriate best practices, and address new challenges as they arise.

Question 4: The Authority invites players to comment on the six proposed directions.

1st direction – The Authority recommends that, to provide "Internet access," an ISP must be obligated, in accordance with the legal provisions in effect, to furnish end users with the ability to: send and receive the content of their choice; use the services and run the applications of their choice; and connect the hardware and use the programmes of their choice, provided they do not harm the network.

We are committed to providing Internet access services that comply with the principles embodied in this direction. Consumer demand and competition will ensure that broadband providers do so. Therefore, there is no need for a regulatory mandate along these lines.

2nd direction – The Authority recommends that the traffic management practices that ISPs employ to ensure Internet access remain exceptional and comply with the general principles of relevance, proportionality, efficiency, transparency and non discrimination.

At present, Direction number 2 is difficult to evaluate fully given the problems addressed above in our comments – particularly in understanding the meaning and scope of the "relevance" and "effectiveness" principles – but would deprive providers of needed flexibility in managing their networks. As a result, providers would be less able to efficiently respond to evolving challenges and to meet their consumers' expectations for high quality, safe services.

3rd direction – A connection to the Internet must be provided with a sufficient and transparent quality of service. To guarantee this, the Authority is launching sector-specific efforts to qualify the minimum quality of service parameters for Internet access, and is working to implement specific indicators.

Direction number 3 presumes, in keeping with the intent of the Universal Service Directive, that the Authority has identified that the market is not delivering a sufficient baseline level of quality of service – prompting the need for one to be developed and set. It would seem that the analysis of the market, indicating this deficiency, would need to be set out in terms sufficient to understand the environment in which baseline service levels should be developed and set.

4th direction – To maintain all of the players' capacity to innovate, all operators must be able to market "managed services" both to end users and information society service providers (ISV), in accordance with competition laws and sector-specific regulation, and provided that the managed service does not degrade the quality of Internet access.

As discussed in our comments above, we find it difficult to understand the scope of the consultation paper's definition for "managed services," why the designation is necessary and how or when proposed guidance regarding network management practices would apply. That said, we agree that it is essential that providers maintain the flexibility to offer "managed services." In fact, the ability to offer such services is essential to encouraging continued broadband investment and to ensuring that services continue to satisfy consumers' demands as the uses of broadband networks evolve. Any provider that continues to offer a traditional Internet access service, however, should have complete flexibility to offer consumers the choice of any additional services, including managed or otherwise differentiated services that may or may not include access to the Internet.

5th direction – To eradicate the opacity that currently exists in data interconnection markets, and to obtain information that will be useful to exercising its powers, the Authority will soon be adopting a decision on the periodical collection of information on these markets. Based in part on this information, the Authority will later assess whether it is necessary to implement regulation in these markets.

We believe Direction 5 to be very problematic – suggesting that it will eliminate what it considers the "opacity" of peering arrangements and the interconnection generally – notwithstanding the high level of competition among such services and the lack of any evidence of a problem to be addressed. As we stated in our earlier comments to ARCEP in the pre-consultation, the issue of interconnection will likely play an important role to ensure that the policy goal of universal connectivity is maintained in a NGN environment. Markets for the exchange of traffic among IP networks have evolved over the last dozen years, and largely done so outside the regulatory framework that countries have applied to interconnection for the exchange of traditional circuit-switched traffic.

Increasingly, there is a spectrum of IP interconnection arrangements available, involving settlement free exchange in narrow geographies, settlement free exchange across broader geographies, "Partner Port" connectivity for CDNs, transit rates at different levels for different volumes and/or characteristics, etc. For instance, Verizon's "Partner Port" program allows content owners to directly connect their servers or storage devices to the Verizon network and bypass the traditional backbone peering system, allowing faster and more reliable delivery. The market for Internet connectivity is vigorously competitive and dynamic, and companies, including Verizon, continue to negotiate a wide range of market-driven connectivity arrangements. There is no single paradigm for Internet connectivity, but rather a spectrum of negotiated options.

Governments should recognize that these markets have performed well, with low prices and incentives for investment, and that the IP market model appears to provide the proper basis for the interconnection of NGNs.[47]

6th direction – ISPs must 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. As a result, the terms "Internet" and "unlimited", for instance, must only be used if they satisfy the terms defined in section II.a and ff. Moreover, the Authority is committed to a system whereby ISPs will periodically publish quality of service indicators that are specific to their retail market data services.

Verizon agrees that transparency is important, although, as discussed above, we think that the development of best practices is the most effective way to increase transparency in a manner that would benefit consumers and avoid unintended consequences. Any direction concerning transparency, however, needs to embody the notion of "meaningful" transparency – that which enables the consumer to make an informed choice. Often, in the debate over the need for net neutrality-related rules, we have encountered calls for far deeper transparency into network operations than would ever be necessary for a consumer to understand the extent and limitations of a service choice – essentially, windows into all policies and procedures, irrespective of whether they are proprietary, or necessarily confidential for purposes of network security and the preservation of user quality and privacy. Such calls for over-inclusive "transparency" should not be considered necessary to address the concerns related to user choice at issue in this proceeding.

Question 5: The Authority invites players to comment on its analysis of the other dimensions of neutrality.

At pages 45-47, ARCEP discusses brining in the ITU to have a greater role over international policy issues regarding Internet "governance." "Internet governance" is an expansive term that refers both to the technical conventions and protocols that govern the functioning of Internet-based communications – such as domain-name system operations – and to the rights and duties associated with Internet use, ranging from spam though taxation to calls to regulate commercial peering and transit agreements.

Verizon believes that the Internet's ubiquity has been instrumental in the promotion of global business and the diffusion of ideas around the world. It also believes the Internet's flexible design, decentralized nature and open access principles have spurred innovation. Verizon also recognizes that some governments around the world continue to be concerned with public policy issues affecting the Internet, including how the Internet is managed and whether there is adequate accountability.

Verizon's overarching goal is preservation of a commercially governed, well-functioning global Internet. Sound management of the Internet's technical elements as provided by the current system of private governance is essential to the stability and security of Internet communications. Lack of international agreement on a technical level could lead to communication failures, such as if computers in different countries were directed to different Web sites when the same URL was typed. Reaching agreement among the

[47] See, e.g., Paltridge, Sam, Internet Traffic Exchange: Market Developments and Measurements of Growth, OECD, DSTI/ICCP/TISP11/Final, Paris (2006).

multitude of public and private organizations that have actual or potential say in governing aspects of the Internet today is a significant challenge.

Furthermore, the push for a broader definition of Internet governance coupled with heavy public-sector involvement, we believe, opens the door for the imposition of economic regulations on the Internet or of other policies that chill investment and innovation. Such actions would stand in contrast to the model represented by ICANN, for instance, where private-sector leadership has resulted in decisions consistent with risk and investment. These include establishing policies to deal with domain name and intellectual property disputes, studying ways to improve the accuracy and reliability of the WHOIS database, and the slow and controlled roll out of new top level domain names. Verizon continues to advocate for continued private sector management in other countries and in international forums, including the ITU, the Internet Governance Forum and to the European Commission.