



**« Net Neutrality » Public Consultation
Direction Générale de la Compétitivité
de l'Industrie et des Services**

17 May 2010

Comments of Cisco Systems

Cisco Systems, Inc. (“Cisco”) hereby submits these comments in response to the Public Consultation launched by the “Direction General de la Compétitivité de l’Industrie et des Services”. Cisco is the world’s largest manufacturer of networking equipment and a market leader in the provision of network management solutions and applications that require appropriate network management. It is also a leader in the development of managed internet protocol products and solutions used by individuals and enterprises throughout the world. Cisco welcomes the opportunity to participate in this debate in France and looks forward to working with the Ministry over the course of this proceeding.

1. Etes-vous d’accord avec la définition de la neutralité du Net et les dimensions du débat présentées ci-dessus ?

The so called “net neutrality” debate that started in the United States in 2005 has evolved from a simplified slogan into a more sophisticated, nuanced and important discussion of how to maintain the principles of an open Internet while meeting the needs to manage networks in the face of dramatically growing demands on those networks from a wide range of bandwidth hungry applications that have widely differing characteristics.

In our view, the ultimate goal should be to maintain an open Internet and permit networks to be adaptively managed to optimize the needs of different subscribers and applications without jeopardizing consumer protection or competition.

As a company, Cisco has long supported an open and innovative Internet and continues to do so. Many of the Internet’s benefits come from its open nature and the ability of anyone to develop new and innovative devices and services that connect to it. Such innovation has created entirely new industries and has fostered competitive markets in Internet applications and equipment. Recognizing these advantages, Cisco helped produce the High Tech Broadband Coalition’s “*Connectivity Principles*” in 2003, which were also reflected in the FCC’s Policy Statement of 2005.

Consumers, within the bandwidth limits and quality of services of their service plans should:

- a) Have access to their choice of legal Internet content
- b) Be able to run applications of their choice
- c) Attach any devices they choose to their broadband Internet access
- d) And fourth and most important, receive meaningful information regarding their broadband Internet access service plans.

Similar connectivity principles have also been embedded in the revised framework Directive, which establishes that national regulatory authorities shall promote the interests of the citizens by, inter alia, promoting the ability of end-users to access and distribute information or run applications and services of their choice.¹

¹ Article 8g Revised Framework Directive

We fully embrace these connectivity principles, and we also believe an “open” and competitive Internet must include the ability of network operators to innovate within the network so it must permit network management and managed services (such as high definition video conferencing (TelePresence) or HealthPresence) to offer consumers additional choice through tiering, quality of service, security services, and other network management techniques.

Besides the network management debate, and the related consumer protection issues, there is also a fundamental economic debate around business models which is well described in the consultation paper. We believe service providers should retain the ability to offer differentiated services at different prices, and explore new two-sided or three-sided business models. The future business models for the broadband Internet are still evolving and being tested, and it is not entirely clear that the single-sided, subscriber pays a flat rate model is always in the best interests of consumers.

Finally, there is also the debate around freedom of speech and an uncensored and pluralistic Internet, which are key elements of an open Internet. In our view, this important debate should be undertaken with the entire value chain in mind and should not be confused with the debate around network management. Operators’ traffic management measures do not restrict consumer’s fundamental rights, such as freedom of speech or privacy of telecommunications. They are concerned with the way the service is delivered, not with the actual content of the data carried over the network.

In fact, smart, managed networks enable citizens to exercise their fundamental rights online and are essential to supporting an environment of online trust. By providing a secure, safe and reliable network, even in the case of extreme traffic peaks or of cyber crime attacks on the functioning of the Internet, they ensure continued access for citizens to fundamental forms of expression in the digital world.

2. Parmi les problématiques identifiées, quelles sont celles qui justifieraient de façon prioritaire un engagement des pouvoirs publics ?

There is an important need to ensure the Internet remains open and that consumers can access any legal content and applications. It is also important to avoid anti-competitive behavior by Internet service and application providers. And, there is a need for networks to be managed. The question is what is the best policy/regulatory regime to ensure a balanced approach to achieving these goals?

First, it is important to remember that all regulation has costs as well as benefits. The key is to weigh the costs and benefits and ensure that the latter outweigh the former. This is especially true where there are existing regulatory and policy regimes so the question is weighing the relative benefits vs. costs of new regulation.

In Europe, we believe there are sufficient tools within the competition and sector-specific framework to safeguard an open internet, protecting consumers and competition. We do not think there is a need for new ex-ante regulation. If necessary, France could clarify the scope of

the rules contained in the new Directives, but without creating additional measures. If in the future, gaps were identified in existing authority, any new requirements need to balance the goals of new network investment and services with the need for consumer and competition protection and ensure the benefits outweigh the costs.

3. Quelles différences et points communs identifiez-vous entre les contextes américain et franco-européen ? Dans quelle mesure cela peut-il impacter le débat et l'intervention publique en France ?

The core goals and principles are the same, to ensure the openness of the internet, and protect consumers and competition. However, the regulatory framework in the US is very different from the Regulatory framework in Europe. Also, the European and French “net neutrality” debate has a dimension regarding freedom of speech, which is less present in the US debate, more focused on the technical issues such as management of networks.

The US started a process last autumn on “Preserving the Open Internet, Broadband Industry Practices”.² In April, the Court of Appeals for the DC Circuit overturned the FCC Order against Comcast’s network management practices. This ruling effectively called into question the FCC’s authority to regulate net neutrality issues at all. In a recent statement, the Chairman of the FCC³ has outlined a “third way” to provide the FCC with adequate jurisdiction by reclassifying portions of broadband internet access service as a telecommunications service. This drastic action is being considered because of the inflexible nature of US telecommunications law and the relative difficulties in altering the law in the US Congress.

The outcome of the FCC’s openness of the Internet proposed rule making is still uncertain, and presumably the issue of competence will need to be resolved first before any decision on substance is taken. However, this proceeding and potential rules that may be adopted as a result of this proceeding, are specific to the US regulatory context. In Europe, we have already taken a number of choices to ensure and preserve the openness of the Internet, and, in our view, no new rules are required.

Indeed, the European regulatory framework provides Regulators a direct authority over the provision of electronic communications services, including broadband services. In the context of the new Directives, there are also specific provisions that have been agreed in order to ensure an open internet. In addition to the connectivity principles, new transparency rules have been adopted, to ensure consumers are aware of any limitations in their broadband service plans. Finally, a new reserved power is granted to all Regulators in order to impose minimum quality of services to prevent degradation or slowing of traffic over networks. The Directives explicitly move away from a pure non-discrimination rule, which in our view would inhibit innovation and the ability of providers to adapt to fast changing markets and evolving consumer needs.

² *Preserving the Open Internet, Broadband Industry Practices*, Notice of Proposed Rulemaking, 24 FCC Rcd 13064 (2009) (“Notice”).

³ http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-297944A1.pdf

4. Avez-vous déjà été confronté à des difficultés se rapportant à la neutralité du Net sur le marché français ? Si oui, lesquelles ?

Not applicable

5. Les règles existantes aujourd’hui en matière de réglementation sectorielle et en matière de concurrence vous semblent-elles suffisantes pour répondre aux questions suscitées sur la neutralité du Net ? Si non, dans quels domaines devraient-elles être précisées ou renforcées et par quel moyen (législation/réglementation, définition d’orientations générales par le régulateur, accord collectif...) ?

As mentioned in point 3 above, we believe in Europe we already have a very robust competition and sector-specific regulatory framework. Besides competition rules, the new Regulatory framework has introduced a new set of transparency rules to ensure consumers make informed choices regarding their internet services. In addition, Regulatory authorities have now the ability to intervene setting minimum quality of services as foreseen in article 22.1. of the revised citizen’s rights Directive (Directive 2009/136/EC), in order to prevent a possible degradation of service quality for consumers.

Given the European Regulatory framework, we do not believe new ex-ante regulation is needed. France will now need to implement the European Directives into national law, and in this regard, there may be a need, at some point, to clarify the reserved power foreseen in article 22.1. This could be done by issuing guidelines to Regulators, either at the European level, or at the BEREC level. We would have reservations about any proposals which may narrowly define which management practices are acceptable and which ones are not, beyond general provisions to avoid blocking or degradation in an anti-competitive way. We would also be concerned with a pure non-discrimination requirement, as has been suggested by some “net neutrality” proponents.

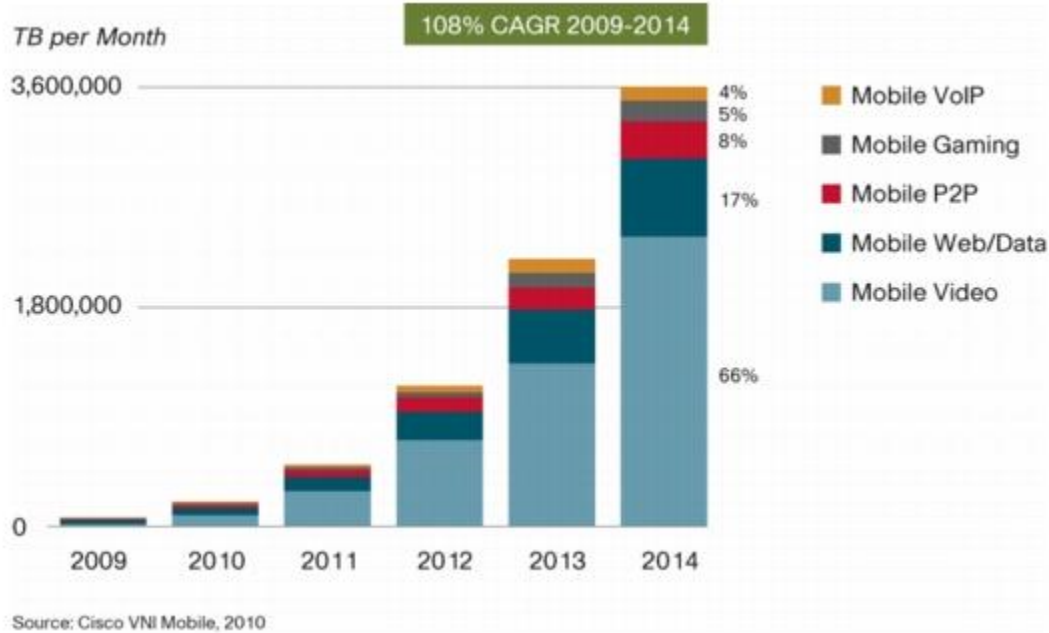
In our view, it is important that broadband providers should retain broad discretion to employ necessary network management techniques, and the ability to develop and offer innovative new managed services to customers who value these products. Likewise, it is important that providers retain the ability to engage in two-sided or three-sided business models, involving service providers, application or content providers, and consumers. These types of “cost sharing” models can be both more efficient and equitable, and reduce broadband costs for consumers and increase adoption.

6. Une distinction vous semble-t-elle nécessaire dans l’analyse entre l’Internet fixe et l’Internet mobile ?

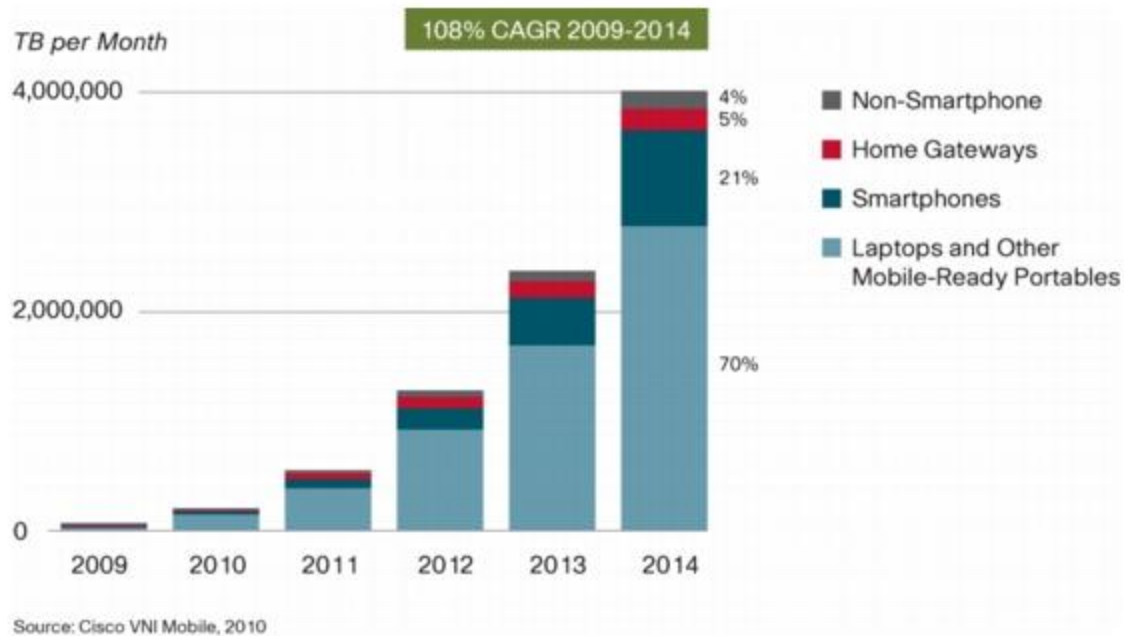
The principles should be the same, but clearly the types of reasonable network management techniques is going to differ between fixed internet and mobile internet, and also within different types of mobile networks, e.g. GSM networks, 3G networks or LTE networks. Mobile networks have specific spectrum constraints and very different capabilities for data.

If we look at Internet traffic growth generated by consumers over the past years, essentially growth has been driven by Video over Internet using a PC or IPTV (our prediction is that traffic generated by video over IPTV will be multiplied by 15 globally between 2007 and 2011).

If we look at the mobile traffic specifically, the same trends appears : globally mobile data traffic will double every year until 2014, and mobile video will represent 66% of total mobile traffic in 2014.



Europe will represent around 32% of mobile traffic in 2013. A significant part of this mobile traffic will be handled by portable PCs or similar devices, with USB 3G/LTE key, as well as smart phones. The Apple iPhone experience has clearly shown users of this type of devices are heavier users of bandwidth hungry applications.



So both mobile and fixed networks are experiencing an explosion of traffic, and will experience congestion, and network operators should be able to deploy network management tools appropriate to a particular network to address congestion and ensure quality of service.

7. Une distinction vous semble-t-elle nécessaire dans l’analyse en fonction des différents services de l’Internet ?

The dramatic growth of internet traffic explained in 6 above will come from a range of applications and services, driven by video, that have different requirements. Some will need high speed download capacity that is not time sensitive. Others will use high bandwidth one-way streaming in which latency is a factor. Other applications, such as VoIP, will not require high bandwidth but will be symmetric and need very low latency. And some, like TelePresence and other high definition real time two-way video, will require very high symmetric bandwidth, low latency, and no jitter. In other words, different applications will require differing network requirements and, as a result, the optimal network will be adaptable in order to be “fit for purpose.”

New Services/Applications Place New Demands on the Service Provider’s Infrastructure

Service/ Application	Symmetry	Bandwidth Consumption	Delay Req’ts	Packet Loss Req’ts

Voice	Symmetric	17-106kbps Constant	<150ms (1-way)	< 1%
Broadcast Video	Asymmetric	2 – 15Mbps Vari. Or Const	Consistent (< 30ms)	<.0001%
Telepresence	Symmetric	4 – 11Mbps Variable	<150ms (1-way)	<.05%
Data	Asymmetric	TCP Adapts to BW Avail. Bursty	Delay Insensitive	Drop Insensitive

Equally, internet services will mature over time: new commercial offerings may be offered over the internet and the consumer will enjoy premium services, and be willing to pay more for additional value.

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