

**Telefónica Group contribution to the**  
**QUESTIONNAIRE FOR THE PUBLIC CONSULTATION ON THE OPEN**  
**INTERNET AND NET NEUTRALITY IN EUROPE**

Telefónica welcomes the opportunity to contribute to this Commission consultation on the Open Internet and net neutrality in Europe. We think it is a timely and necessary consultation and we appreciate the Commission's work in this field.

**I. Executive summary**

1. Telefónica thinks that there is no real problem of net neutrality or Internet openness in Europe.

The Open Internet is currently a source of services and content very valuable for consumers. **Operators and ISPs have clear incentives to offer the complete set of services and contents that the Internet is offering.** The competitive nature of the broadband Internet access market makes that any attempt by operators to block or distort Internet openness would make customers switch to another operator and will not pay off.

This situation is expected to continue for the foreseeable future, all forecasts point to a continuous and strong development of “best effort” Open Internet services. Operators and ISPs will continue having a clear interest to offer these services. Therefore, **there is no significant problem justifying regulatory intervention.**

2. **The EU framework for electronic communications together with competition law and consumer protection legislation is capable of dealing with the issues that may arise in the future.** The EU framework

contains basic provisions on net freedoms, transparency and the possibility to set minimum quality standards.

Telefónica thinks that the provisions on net freedoms and transparency, together with the competitive nature of broadband in the EU, are more than enough to guarantee that users can access the Open Internet. **Transparency and users choice are much better tools than an intervention on quality levels.** Quality of Service is a competitive tool of the operators and that is subject to the competitive dynamics. The ability of NRAs to intervene in minimum Quality of Service issues could constitute a far reaching power that should only be used for serious specific cases.

We acknowledge that it is necessary to work on a framework of consumer transparency that provides users with meaningful and clear information about the broadband access offers that are available in the market. We support a sound regime that strikes the right balance between the amount of relatively complex information and the usefulness of it for the consumers. We are prepared to work and cooperate to achieve it.

3. **Traffic management is vital for operators** to prevent network congestion, to deliver to users an adequate quality for some Internet applications and services, and to meet legal requirements. Furthermore, traffic management can unlock the delivery of new innovative services on Internet. Traffic management is therefore a key feature to have efficient, state of the art, reliable and sound networks.

**Any limitation imposed by net neutrality regulation to the ability of operators to perform an adequate and fair traffic management would be highly detrimental, affecting the economic sustainability, the innovation, future investments and user experience on Internet.**

4. Finally, regarding net freedoms, Telefónica fully agrees that the Internet is an essential platform for the political, cultural, and social participation of citizens. **Telefónica supports that consumers should be able to exercise their rights as freedom of expression, media pluralism and cultural diversity on the Internet**, as well as to access any content on the Internet, and run any application and device that they choose.

The net neutrality debate is really a technical and economic debate, that concerns mainly the ability of operators to adequately manage their networks in order to provide electronic communications services. This does not jeopardise net freedoms. Network management deals mainly with the way to provide the contents/applications, but does not really look into the actual content delivered to end users.

## **II. Responses to the questionnaire**

### **The Open Internet and the end-to-end principle**

**Q1 - Is there currently a problem of net neutrality and the openness of the internet in Europe? If so, illustrate with concrete examples. Where are the bottlenecks, if any? Is the problem such that it cannot be solved by the existing degree of competition in fixed and mobile access markets?**

Telefónica thinks that the assessment of the Commission consultation document in point 4.1 is broadly correct: *So far, 'internet access' has basically been unrestricted with access to everything the internet has to offer (content, applications – some of them only available for a fee) – as opposed to a selection of content/applications pre-approved by the ISP (sometimes referred to as a 'walled garden')*

We think that users are demanding open access to the Internet, and it would be a mistake by operators to try to block or distort the way their customers access the web. In fact, there have not been major cases or disputes in the EU regarding Internet openness.

We think that the competitive framework in the EU guarantees that no single operator can distort or restrict the openness of the Internet, because users and consumers have several options to choose for Internet access. In most areas of the EU, users can choose between 3 or more operators, both in fixed and mobile

markets. The competitive nature of the Internet access market ensures that ISPs have incentives to offer the complete set of services and content. The user would simply switch to another operator if his experience is compromised because an ISP is not allowing access to the services and content they demand.

As long as users have the ability to choose between different operators and there is an adequate degree of transparency, there is no reason to think that there will be problems.

Therefore, there is no critical problem justifying regulatory intervention. Quite the contrary, in the Internet environment market forces have been effective so far and there is no evidence that this it should be different in foreseeable future.

**Q2.1 - How might problems arise in future? Could these emerge in other parts of the internet value chain? What would the causes be?**

It is difficult to foresee possible problems in the future. As mentioned above, the Open Internet is something very valuable for consumers. Telefónica does not anticipate problems to emerge that risk the open character of the Internet. All forecasts of development of IP services point to the strong development of “best effort” open Internet services, showing that there will be a clear interest of operators/ ISPs to offer these services.

Regarding other parts of the value chain, the debate so far has been mainly focused on access operators and ISPs and the possible incentives for discriminating against Internet applications, contents and providers. It is necessary to highlight that the free flow of services, applications and content does not only depend on the network providers; it depends on other parts of the value chain as well. However, right now we think there are no major problems in other parts of the value chain either, and it is also difficult to anticipate what possible problems may arise.

Provision of transparency by other players of the value chain would be beneficial and would help users to understand the services and applications they are using. But, as pointed out above, it is difficult to point at current problems or to anticipate potential problems.

**Q3 - Is the regulatory framework capable of dealing with the issues identified, including in relation to monitoring/assessment and subsequent enforcement?**

Telefónica thinks that the EU framework for electronic communications, together with competition law and consumer protection legislation, is generally capable of dealing with the possible issues (now only hypothetical) that may arise in the future. The consultation document lists the main provisions of the framework, which are mainly related to net freedoms, transparency and minimum QoS.

The ability of NRAs to intervene in minimum QoS issues could constitute a far reaching power. The fact that this ability to intervene exists, means that the EU framework right now has more capability of intervention and enforcement about net neutrality issues than the US framework; whereas in our view the structure of the EU market means it is far less likely to see net neutrality issues arise than the US.

**Traffic management/discrimination**

**Q4.1 - To what extent is traffic management necessary from an operators' point of view? How is it carried out in practice? What technologies are used to carry out such traffic management?**

The Internet ecosystem is evolving very quickly and new needs for traffic management derived from new services and user behaviours will gradually arise. It would be difficult and risky to specify in advance all the types of traffic management that could be necessary in the future, but we can quote some examples of traffic management purposes:

1. The ability of network operators to manage network congestion and capacity constraints. Networks are shared infrastructures that are dimensioned in accordance with statistical criteria of usage. In general any network resource needs management. Network planners have to design

systems that, with a given level of investment, avoid the collapse of network services.

Telecom broadband networks are vulnerable to severe congestion also because the patterns of usage change very quickly. When the demand for a resource grows exponentially, as has been the case during last years due to massive data traffic, the importance of the management techniques obviously increases. The importance is even higher when the possibility of increasing capacity is difficult, as is the case with mobile networks, especially in the absence of new spectrum.

If the implementation of the net neutrality concept would restrict any network operator's ability and techniques to manage the traffic in their networks, networks will be more likely to suffer congestion problems or even collapse and therefore services will not be delivered to final users in an adequate or consistent way.

2. Give priority to some type of latency and jitter sensitive applications that need to work in real time (voice, on-line gaming, IPTV, Video Conferencing, ...), or to ensure emergency services. Broadband services are characterized by the sharing of limited network resources by number of users using different services and application with completely different sensitivity (e.g. to latency) from a user experience point of view. While the latency parameter is critical for voice applications, on-line games or terminal applications usually transmitting low amounts of data, it has no impact on the user experience when, for example, downloading large files. It is therefore necessary for operators and ISPs to be able to implement functional traffic management in order to manage user experience of their customers and network costs at the same time.
3. Offering "clean services" (e.g. free of spam) or child protection functionality.
4. The ability to set up new ways to organize and provide services. Traffic management policies enable the establishment of innovative ways to offer a wider range of services, for example with different qualities and

prices, targeted for different user demands and to develop new business models over the open Internet<sup>1</sup>.

Traffic management and service differentiation can be an important element in the future to accelerate the virtuous circle of new investments and new services and will be a common practice in electronic telecommunications networks.

Traffic management and the service differentiation it can offer will be fundamental to competition going forwards. The absence of differentiation could act as a brake on service innovation, which would be to the detriment of consumers and the service providers those consumers rely on. Policymakers should not seek to remove one of the key 'parameters of competition', which include price, output, product quality and variety and innovation,<sup>2</sup> which operators use to differentiate themselves.

While it seems that there is consensus on the need of network management, some of its possible purposes may be more controversial for some players. Some have suggested that a "non-discrimination" principle should be adopted.

In our opinion, the non-discrimination principle should preserve access to any content, application or service but can not be the excuse for forbidding any kind of service differentiation.

The EU framework does not really foresee a non-discrimination obligation applicable for traffic management of Internet access services. These services are provided in a competitive environment today; customers can exercise an effective choice, and that is why they are out of the SMP scope.

Traffic management practices and technologies will evolve over time as business and technological evolution takes place. Therefore, it would be highly detrimental

---

<sup>1</sup> For example, operators need to have flexibility to tailor the commercial packages to customers needs (e.g. offers targeted to customers that use mainly e-mail and social networks, some may use mainly web browsing, others may need mainly to download data, but this can be made with different quality levels (*gold-silver-bronze*). We can also think about new ways of audiovisual content delivery with improved quality (possibly with some added payments).

<sup>2</sup> See paragraph 25 of the Commission's recent draft Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements (SEC) 2010 528/2.

to innovation if there was to be a closed list of “allowed” network management practices or techniques. Such a list would always run behind technological evolution and new consumer demands.

**Q5 - To what extent will net neutrality concerns be allayed by the provision of transparent information to end users, which distinguishes between managed services on the one hand and services offering access to the public internet on a 'best efforts' basis, on the other?**

See below answer to questions 11-14

**Q6 - Should the principles governing traffic management be the same for fixed and mobile networks?**

Each broadband network has different technical and economic features, and as a result the problems and requirements of network management are different for each network. For example, depending on the architecture of a network, the technologies employed and the customer types serviced, there can be different triggers to avoid congestion in the different parts of the network.

It is clear that fixed and mobile networks have important differences, so it is very likely that they will use different tools for the traffic management.

Some network management tools can be used in different ways adapted to the particular capabilities and restrictions of the network. The main differential feature is, of course, the access, that is shared in the case of mobile and coaxial cable networks and that will likely make necessary more complex techniques than xDSL or FTTx fixed networks need.

Also the different deployment and maturity pace of each network suggests that the implementation of the traffic management techniques has to be evaluated separately.



**Q7.1 - What other forms of prioritisation are taking place? Do content and application providers also try to prioritise their services? If so, how – and how does this prioritisation affect other players in the value chain?**

The existence of companies that provide content delivery networks is well known. These networks provide services to content providers that want to have a better quality in the delivery of content to final users. Some other big Internet players also have their own distributed server farms close to the customer or servers at the operator's premises and direct interconnections with operators to deliver their own services better.

Against this background, the possibility that network operators implement some services with quality differentiation may not be seen as a threat to the "neutrality". In fact, it would only constitute another possibility for other Internet players to choose among a range of possibilities. It may even be beneficial for some smaller companies that do not have the bargaining power to negotiate direct interconnections, or don't have the scale to invest in server farms, or have varied requirements that do not match in the existing solutions.

**Q8.1 - In the case of managed services, should the same quality of service conditions and parameters be available to all content/application/online service providers which are in the same situation? May exclusive agreements between network operators and content / application / online service providers create problems for achieving that objective?**

We generally expect that network offers that allow some enhanced QoS features would be open to all content or service providers. It is in the best interest of operators to maximise revenues and have the maximum number of customers possible. For example, if operators develop a specific service for the provision of enhanced voice, or a videoconference service, there is no reason why it should not be offered to all potential customers.

We don't think "exclusivity" constitutes a problem per-se. Some business models are based on giving some form of exclusivity to a partner, and without that exclusivity the business would not be viable, which is worse for the customers. If

this exclusivity is thought to inhibit competition or cause a serious problem, this can be assessed on a case-by-case basis and depending on the market situation a regulator will take the most appropriate decision.

**Q9 - If the objective referred to in Question 8 is retained, are additional measures needed to achieve it? If so, should such measures have a voluntary nature (such as, for example, an industry code of conduct) or a regulatory one?**

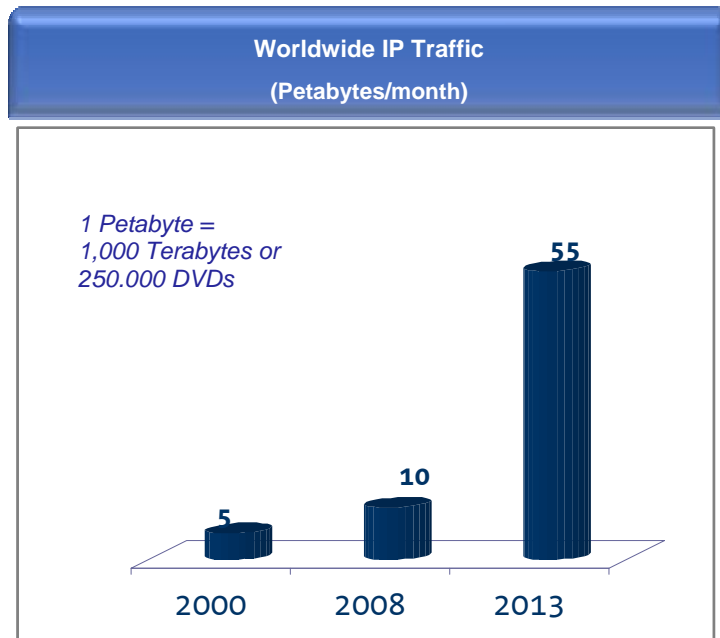
No additional measures are needed. See question above.

### **Market structure**

**Q10 - Are the commercial arrangements that currently govern the provision of access to the internet adequate, in order to ensure that the internet remains open and that infrastructure investment is maintained? If not, how should they change?**

The Internet access has traditionally relied on the well-known system of transit and peering, which is basically made up of commercial agreements among operators. This system has worked reasonably well until now, evolving in a highly competitive environment, and contributing to the development and success of the Internet. In this way, the system has satisfied the needs of all agents involved.

Currently, consumer preferences are changing again and data traffic is increasing exponentially (even more than before), and the balance of that traffic (upstream / downstream) is also changing. This exponential traffic growth seems to be mainly driven by the increasing amount of video that end-users are downloading. This growth of demand for video is expected to continue.



**IP traffic will increase 11-fold from 2000 to 2013**

Source: ITU

Fixed and mobile operators that provide the Internet access services to end-users are under continuous pressure to provide additional capacity to cope with these changes. Until now, the technological evolution has allowed the continuous traffic increases to be absorbed without increasing end-user prices. Some parts of the trunk networks had extra capacity, and the improvements in efficiency implemented by the operators allowed the network capacity to grow.

But it seems that this situation will not be sustainable in the future. The graph above shows that while global IP traffic doubled from 2000 to 2008, it is expected to increase 11-fold from 2000 to 2013. Because of that, operators and other parties are looking for new solutions, in order to meet current and future challenges. The most obvious solution is for operators to invest and increase capacity of the networks. But these investments can longer be offset by increasing revenues. Revenues remain flat or are decreasing due to the highly competitive market of internet access services and the widespread use of flat rates for internet access. These additional investments cannot be fully recouped.

A number of possible ways ahead might merit some further thought:

- A change of the structure of end-user prices, making them more sensitive to the amount of traffic generated. This is a solution used in many mobile networks. However, we think it unlikely that the problems with the exponential growth of traffic can be resolved only by changing end user prices alone. For example, end user will have difficulties recognising the value received from more efficient coding by content providers.
- Another solution could be the development of new wholesale offers for content providers. This would create an incentive for content providers to use the networks more efficiently. It can be implemented in a variety of ways, and there are already some signs that the current peering/transit model is under stresses (the recent AT&T announcement that will only admit peering with a maximum of 2:1 traffic asymmetry is a very interesting one).
- Developing enhanced QoS offerings and managed services to end users and content providers, which will coexist with basic internet access services. These will help to better tailor the products to users needs and to fund networks. For example, making different products available that match the different users' needs, depending on the use they make of the network. There are different profiles of people: some of them use their BB connection mainly for e-mail and social networks, others mainly for web browsing, others make intensive use of video, etc.
- There is a clear need to manage the networks in a more efficient way. Network management without undue and harmful discrimination to competition or consumers is a way to solve part of the problem at an early stage and this solution should not be precluded by any net neutrality regulation.
- Industry will continue working and it is very likely that solutions will be found, such as improvements in coding and compression technologies, in processing power, etc. In the past we have experienced situation of bottlenecks in the network world and they were solved by industry.

It is the responsibility of all stakeholders to work on a future model that can overcome the mentioned failures of the current one. The final aim would be to create a win-win situation where content providers have incentives to make an efficient use of the networks and improve their business case by reaching with a

better quality the mass market of final users; and telcos have stronger incentives to upgrade networks and develop new and specific services. It is difficult to say now what solutions will be the most appropriate or will succeed, but what is important is that flexibility to find new business models by industry is not undermined by any net neutrality regulation.

Regarding the current arrangements and the impact on the Internet openness, we would like to highlight that the situation described above is an economic issue about the sustainability of Internet. The problem is not really related to the Internet openness, which is not challenged. The possible solutions that can be implemented to provide economic sustainability are not really a problem to the Internet openness. For example, network management to avoid congestion could mean treating differently different types of content, but not differentiating on the basis of the content provider. Introducing managed services along with best effort Internet does not mean that the best effort Internet access service is not going to be open, as is now.

### **Consumers – Quality of Service**

#### **General comment on questions 11-14:**

Regarding the set of issues that are involved in these questions, we generally support an approach to transparency and minimum QoS that considers intervention on minimum QoS issues as a measure of last resort. We think that it is necessary to rely on the existing competition framework and consumer transparency before NRAs consider regulatory intervention on minimum Quality of Service.

Probably it is necessary to work on a framework of consumer transparency that provides users with meaningful and clear information about the offers that are available in the market (see below). But we generally think that transparency and users choice are much better tools than an intervention on quality levels which is a competitive tool of the operators and subject to the competitive dynamics.

We think this approach is in line with the recent Ofcom's consultation paper on traffic management and net neutrality:

“... ”

- *It is likely that our initial view would be to explore existing competition tools and consumer transparency options before considering a minimum Quality of Service.*
- *We think that it is important that industry works together to find creative and effective solutions for delivering consumer transparency.*<sup>3</sup>

...”

**Q11 - What instances could trigger intervention by national regulatory authorities in setting minimum quality of service requirements on an undertaking or undertakings providing public communications services?**

We think that any possible type of intervention on minimum QoS is a highly extreme and interventionist type of intervention, and only a clear, serious and identified and reiterates problem can prompt intervention by an NRA on this issue.

Quality issues need to be resolved by the market itself, as it is a competitive parameter that users take into account when deciding about their operator. The intervention on minimum QoS requirements would provide broad powers to regulators. There is the danger that these powers could be used to set standards in IP networks which will be detrimental to the development of new business models and therefore making investments and innovations less attractive. Furthermore, it should also be borne in mind that each minimum quality obligation de facto means a guaranteed transmission quality.

The Internet represents a “best effort” network with no guarantee of service quality; such quality guarantees can become very costly and would ultimately lead to higher prices for network access to the detriment of consumers. In competitive markets where customers can exercise choice, service levels should generally be determined by the market.

---

<sup>3</sup> See pages. 2 and 3 of Ofcom doc. “Traffic Management and Net Neutrality, A Discussion Document”

**Q12 - How should quality of service requirements be determined, and how could they be monitored?**

The application of a regulation that sets minimum quality levels for services that depend on the Internet networks is a very complex issue. This is because of the many parameters involved, in some cases out of the ISP control, which affect quality, and the fast evolution of services, applications and networks.

For example, in the mobile sector it would be very difficult to establish minimum QoS levels because of the shared nature of the access network, and because of the dynamism and the technological changes experienced in the last decade. New mobile applications could make use of a diversity of data and voice streams that require differentiated and specific QoS levels. Minimum QoS standards could jeopardise technological development and evolution of an especially vibrant industry. On the other hand, mobile services and related QoS levels are strongly dependent on the terminals and the number of clients served by each cell, which is variable over time.

**Q13 - In the case where NRAs find it necessary to intervene to impose minimum quality of service requirements, what form should they take, and to what extent should there be co-operation between NRAs to arrive at a common approach?**

It is difficult to imagine right now what form a minimum quality of service requirement should take, as today there are no problems with QoS in general. Nevertheless, we can identify some principles that could guide any possible future intervention on QoS issues:

- As a general approach, QoS levels should be left to market competition and price differentiation
- The focus should be on “non-detriment of consumers” (The EU basis for minimum QoS is art. 22 of the US Directive, that is focused on users/consumers, so it is not a pro-competitive regime, or a non-discrimination regime)

- Any possible intervention should only happen, if and when a problem arises. Currently, we think that there are no problems (in general, in the EU) about minimum QoS issues.
- There should be no a priori restrictions to differentiate QoS. This seems generally agreed, but this approach could be precluded by a “too high” minimum QoS level. So any possible “minimum” level should not be so high that makes it difficult to differentiate (services and pricing differentiation).
- No extra investment implied – a minimum level should not imply overinvestment. The minimum QoS regime should not be used as a tool to force electronic communication providers to invest beyond commercial grounds.

#### **Q14.1 - What should transparency for consumers consist of?**

Telefónica fully supports transparency for final users in order to allow the effective functioning of a competitive market.

Users have to be informed about traffic management practices, possible limitations of their service, QoS differentiation and other commercial or operative conditions.

At the same time, transparency will be important for operators to inform their customers and potential customers about the different options and packages available for Internet access. Transparency would allow them to choose the product that is best suited to their needs in terms of quality and price.

Transparency requirements have to be compatible with the ability of operators to modify traffic management techniques when necessary to adapt them to dynamic challenges.

#### **Q14.2 - Should the standards currently applied be further improved?**

We recognise that it is a challenge to have a framework for transparency that provides users with information that is easy to understand and meaningful, and that allows them to compare the offers of the different service providers.



We think that it is probably necessary to work on a framework for transparency that builds on the current standards, and adds the requirements of the new regulatory framework in an efficient way. Currently we feel that it is necessary to have a learning curve that allows operators to test the effects of the transparency measures on the market.

This would mean that is probably not going to be very useful to start with a set of detailed characteristics or traffic management practices or service characteristics that few users would understand. It would probably be better start to provide customers with a set of information that is proportional and meaningful and then improve this as the effect on customer awareness is tested<sup>4</sup>. At this moment, we think that industry should take the lead in this process.

At the same time, operators have to be able to communicate with their customers in a manner consistent with their brand values, in the normal communications channels. So we should strive towards agreement on *what* needs to be communicated to have sufficient transparency, but the question of *how* it is communicated should be allowed to be done in line with each operators' marketing tradition and strategy. Furthermore, the information should not constitute an excessive burden on operators and/or service providers. For example, the requirement of providing information about changes to conditions has to be made when those changes have a clear/substantial impact on the practical experience of the use of the service.

This work should probably be made at national level, given that there is a history of practices on transparency issues, that should evolve to accommodate the new framework.

### **The political, cultural and social dimension**

**Q15.1 - Besides the traffic management issues discussed above, are there any other concerns affecting freedom of expression, media pluralism and cultural diversity on the Internet? If so, what further measures would be needed to safeguard those values?**

---

Telefónica agrees that the Internet is a vital platform for the political, cultural, and social participation of citizens. We also agree that consumers should be able to access any content on the Internet, and run any application and device that they choose.

However, the ability of citizens to exercise those rights should not be confused with the ability of operators to adequately manage their networks. There has been much confusion about net neutrality from the outset and nowadays many people still consider that the net neutrality debate is about defending civil and individual rights<sup>5</sup>. However, the debate is really a technical and in the end an economic debate about how to manage the network to achieve efficient, resilient and profitable networks.

Some defenders of net neutrality regulation have advocated to transform users' rights into regulated obligations imposed on Internet access operators and ISPs, by demanding that operators give equal treatment to the traffic of any content, applications and platforms on the Internet. This would imply that network operators would not be able to manage their networks.

As long as the purposes of traffic management are related to legitimate purposes and there is transparency about them, the political, cultural and social dimension is safeguarded.

30<sup>th</sup> September, 2010

---

<sup>5</sup> *"Net neutrality is a subject that stirs emotions. Everyone has an opinion and, so far, this has not led to an agreement on what net neutrality actually means....."*Commissioner Neelie Kroes. *Speech at ARCEP Conference. Paris, April 13, 2010*