

eircom Group

Response to European Commission Consultation

Open Internet and Net Neutrality in Europe

30 September 2010



A. Executive Summary

The eircom Group welcomes the opportunity to respond to the European Commission's consultation on net neutrality and to input into the debate on the development of the internet and internet access into the future.

The debate on net neutrality is interesting in that the concept itself can mean different things to different people and can be played out in different guises within the marketplace. In a purist form network neutrality has been taken to mean a principle of network design whereby all content, sites and platforms are treated equally. However, it is a concept that has a number of different definitions and a number of different interpretations. This, in itself, provides an uncertain basis on which to proceed to debate application of network neutrality in Europe, as firstly one needs to have a common understanding of what the concept actually means in practice.

It is crucial that in debating the concept and its potential application in Europe, we understand the type of electronic communications structure that is already in existence, the type of market we would like to see develop, and understand the array of business models that should allow for its realisation.

From a purely operational and business perspective to develop and ensure the type of internet access and infrastructure delivery mechanisms so required to realise the smart economy, four basic principles need to be respected: competition; transparency; smart managed networks; and innovation. The interdependence of all of the above should ensure the market can continue to provide and develop access models to meet consumers demand and ensure openness, innovation and choice.

What underpins the above is the ability for network providers to continue to develop and invest in their networks. This translates to the development of a sustainable business model that will allow for this realisation. If the debate on network neutrality and internet openness in Europe is whether such a structure is currently in operation within the European regulatory framework, then eircom would argue that it is. This, however, is based on the concept of net neutrality whereby consumers and business customers are able to access content, applications and services of choice and in a manner that meets their individual needs. Therefore, if through this Consultation process we are seeking an agreed interpretation of what net neutrality should or could mean, then eircom would maintain that this definition best reflects the current open internet structure that exists within Europe. In this regard, the eircom Group would also argue that an open internet can continue to be realised through the application of current rules.

The more fundamental issue remains the on-going evolution of the relationships between all participants within the value chain of internet provision, i.e. network operators, content and service providers. Ensuring the space to allow for innovative new business models to be realised is key.

In summary, the eircom Group would not support the introduction of a further layer of network neutrality regulation. Currently in the EU, internet-adoption is flourishing driven by competition, transparency and consumer choice. The immediate challenge is to foster the step-increase in investment in infrastructure required to maintain this

momentum. This investment case depends on network operators' freedom to innovate and develop new economic models in the market, including those based on managed services as well as public internet services in order to meet the needs of our customers.

The current and evolving legal and regulatory framework based on competition rules ensures open access at the network layer, including important price and quality controls where declining Significant Market Power still exists. Further enhancements to the rules on consumer and data protection, if applied to all players in the internet value chain, will ensure that all foreseen challenges to an open transparent internet can be addressed in a timely fashion.

B. EIRCOM GROUP RESPONSE TO QUESTIONS

Question 1

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?

The eircom Group does not believe that there is a problem of net neutrality and openness of the internet in Europe and would maintain that the current regulatory framework will continue to provide the best environment to ensure openness and accessibility for both business and consumers alike.

The revised Directives that govern the provision of electronic communications and services within the European Union make specific reference to the rights of the consumer when accessing internet services and applications. The surety provided through the new regulatory structure is grounded on a basis of a competitive market structure that acknowledges the rights of consumers to have information to make an informed decision as to the appropriateness of internet service provided. This is balanced by the ability of national administrations to set minimum quality of service levels, to ensure that end users enjoy the types of services required and protect against any possible degradation of service quality for consumers. The ability also exists for regulators to promote users ability to access and distribute information and run applications and services of their choice. However, application of such interventionist measures as minimum quality of service requirements are a potentially distortive tool in a dynamic internet environment and should only be applied after thorough impact assessment.

It is appropriate that in addressing the issue of network neutrality the European framework acknowledges the fact that a competitive market will provide users with a wide choice of content, applications and services. It is the competitive market that is looked to ensure provision and provide choice of access, based on a framework that promotes openness and accessibility. The current framework places this balanced competitive and consumer rights agenda to the forefront of policy guiding the direction and development of the electronic communications sector in Europe.

eircom subscribes to the belief that consumers are empowered to make appropriate choices when there exists a competitive market providing an array of differentiated products and services. Such a market in itself drives innovation and must enjoy the freedom to develop and offer services to meet the myriad of requirements from different user groups.

Question 2

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

To sustain and develop the type of market structure that will meet current and future needs, eircom would maintain that it is important that all players within the internet “value chain” contribute to the development of the network structure. It is important that we recognise that all players within the internet community have a contribution to make to ensure its development and growth. Therefore, network operators and internet service providers must continue to have the ability to experiment with new and different service offerings and business models.

Due to the changing dynamics of the market such as increased usage, requirements for advanced and differentiated services, the business models that currently underpin the provision of access will be exposed to increasing pressure for change. To ensure that dynamic, the business models employed must encourage the efficient use of network resources and must encourage all those that benefit to contribute. By this eircom would support the opinion that all players in the value chain should fairly and proportionately play their part in the funding of the capability of the network.

In addition, the concepts of openness, transparency and competition must apply to all players within the value chain, not just network operators.

In light of the above eircom would maintain that seeking to apply a purist concept of network neutrality (i.e. a principle of network design whereby all content, sites and platforms are treated equally) on regulated markets within Europe would result in a network operator being prevented from managing its network traffic flow or from offering service differentiation and, therefore, would act as a limiting barrier to overall development. eircom believes that the purest concept of network neutrality will lead to unaffordable products and services for the end-users.

It should also be noted that current market structures allow for degrees of flexibility in network management and therefore, to a greater or lesser extent, some discrimination already exists. Discussing the application, therefore, of a concept of network neutrality whereby all content, sites and platforms are treated equally eircom would argue is somewhat artificial. What is more appropriate is to seek to raise the debate to address the manner in which we in Europe manage current business structures and plan for the development of innovative new business models.

Question 3

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

Yes.

eircom would maintain that the current regulatory framework will provide the basis on which to deal with any issues identified and the framework provides a basis on which innovative business models are given the freedom to develop.

As the European Commission has already pointed out, changes to the regulatory framework governing the electronic communications sector introduced in 2009

introduced obligations on providers of connections to public communications networks and electronic communications services with respect to the content of contracts, the provision of additional information requirements on operators, and intervention mechanisms for national regulatory authorities in respect to the establishment of minimum quality of service requirements. Coupled with a strong competitive market, eircom would argue that the aforementioned will provide the necessary safeguards for operators and consumers alike to ensure both access and appropriate information on service delivery.

Europe enjoys a robust regulatory framework coupled with strong competition powers to ensure that markets both promote access, provide transparency for consumers and allow for regulatory measures (where necessary) to address problems in market delivery. Therefore, it should be noted that a breadth of options already exist for national administrations to intervene if market problem arise with specific remedies if appropriate.

Finally, in respect of high-risk NGA investments, where the EU has decided to impose ex-ante open-access obligations, further remedies to enforce an ill-defined concept of net neutrality currently foreseen in markets where such access obligations are not imposed, would amount to a disproportionate regulatory intervention.

Question 4

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?

Traffic management systems are currently in place both for the fixed network and the mobile network and are necessary and important tools to deal with congestion, provide an efficient service and to guarantee and provide a quality end user experience.

As an operator with both a fixed and a mobile network it is important to separate out why traffic management systems are required in respect to both, and the benefits for the end user that are realised through their application.

In the broad sense traffic management is a necessity on all networks to manage the network capacity and ensure it stays ahead of customer demand. In the context of this questionnaire, it may be helpful to focus on the use of IP QoS and Deep Packet Inspection (DPI) techniques. IP QoS is the ability to prioritise some traffic so that low priority traffic can be dropped in the event of congestion. DPI is used to identify application types within traffic streams and allows the operator to measure or take some type of action on the application traffic. IP QoS could be used to ensure that a TV stream is not interrupted by a concurrent file transfer on the same customer connection, by dropping some of the file transfer traffic and retaining all of the TV traffic. DPI could be used to identify and block or throttle a particular type of traffic from within an Internet traffic stream. This could be done to manage network load at peak times, by selectively dropping traffic from robust applications where speed of delivery is not critical to the user experience. There are several other possible uses for DPI including the identification and prioritisation of certain traffic types.

eircom uses IP QoS extensively in its IP network to prioritise business traffic over consumer traffic. IP QoS is also used widely with IP based business products to

prioritise time sensitive services such as VoIP traffic which requires real time delivery to be a meaningful service to users. It is not yet used with consumer broadband products. DPI is not used on eircom's fixed network at this time. The preferred way to deal with the growth of consumer broadband traffic is to provide products with an element of usage based pricing so that the revenue grows in line with usage and in line with the need to invest in additional network capacity.

With respect to mobile, we are witnessing a huge growth in demand for mobile internet. As a mobile network operator, however, our mobile network is constrained by the amount of spectrum available, which in turn requires a pro-active traffic management approach. Not only, however, is this approach a necessary technical requirement, it is also employed as a means to differentiate product and services and as a tool for the development of new services. Traffic Management can help alleviate these issues by factoring in traffic type, subscriber type and network conditions to optimally utilise the network capacity available.

For mobile broadband, DPI technology is deployed to restrict access to illegal sites (such as those containing child sexual abuse images) according to block-lists managed by the Internet Watch Foundation (IWF). DPI inspects the internet traffic to identify and block traffic from prohibited sites on the IWF list. The DPI capability deployed can also prioritise traffic based on traffic type or subscriber, but this capability has not been implemented to date. The use of DPI is typically easier and cheaper to implement with mobile broadband as the levels of traffic are lower than with fixed broadband.

As a personal device and service, mobile typically has requirements above and beyond fixed access, for example, parental control is widely used and expected by the market. These services are typically delivered as an opt-in for an account holder and require traffic to traverse traffic management devices such as content filters. Such services are offered in response to customer demand.

Network operators can also have arrangements with content delivery networks (CDNs) whereby content can be delivered directly into the operator's network without traversing the public Internet. Content providers pay to carry their content on the private CDN network, where the traffic can be managed and delivered at a point 'close' to the customer thereby maximising quality control. This helps ensure that customers receive a more consistent delivery service than they might get through the public Internet. The benefit for the network operator is that it reduces the amount of traffic to be taken from the Internet, thereby reducing the cost for international connections and Internet transit fees. Some content providers build their own 'private Internets' to carry their content exclusively with much the same benefits for themselves (quality control) and for the network operator. This is only cost effective for large content providers and smaller content providers will typically pay Internet transit providers to carry their traffic.

Even with this approach the content owner still does not control the portion of the network within the network operator's domain. It is a small step to see that a network operator could agree with a content provider to give preferential treatment to their traffic under a business arrangement so that delivery quality is controlled end to end from the content source to the consumer – sometimes referred to as the two sided

business model. Such an arrangement can have a positive impact on service delivery, with ultimately a positive impact on the services offered to a consumer.

Question 5

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 hand?

It is imperative that all end users benefit from open and transparent information and eircom is committed to providing consumers with clear explanations as to how internet connections are managed, the services that can be provided and the types of end user experience that one can enjoy.

This question is framed, however, by distinguishing what is a managed service and services that are offered to end users on a best efforts basis. Whilst the two services may be different, both place the onus on a service provider to ensure that the end user is adequately informed as to the types of service level that they can expect. Managed services are those whereby the operator determines the service level to be provided to the end user, compared to a “best efforts” approach whereby the end user may experience fluctuations in service level. Terms and conditions for both services should be part of the information provided to an end user.

Therefore, a vibrant, competitive market, with transparent information is key for a consumer to exercise this choice. eircom would argue that this can be realised through current regulatory structures.

Question 6

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

Traffic management is necessary in both fixed and mobile networks, and therefore, eircom would argue that the principles governing traffic management should apply equally.

Modern networks often have a common IP core for both fixed and mobile access and both can be seen as different ways of accessing the same IP/Internet services. Any traffic management applied in the core would be applicable to both. Also, both fixed and mobile access can experience congestion where services can benefit from traffic management i.e. selective packet dropping. Capacity limits and the potential for congestion can be inherent in the technology; with mobile the throughput available at a given time is dependent on the amount of radio spectrum available and variable radio conditions which can lead to severe capacity restrictions. With a fixed access technology such as DSL the throughput possible on a given line is limited by factors such as distance from the serving exchange.

With respect to mobile, the traffic that can be carried at any one time on the networks is also limited and dictated by the amount of radio spectrum available. This in turn can lead to severe capacity restrictions. An unmanaged network, therefore, whereby all traffic is treated the same and all services delivered on a best effort basis, would destroy

the type of managed networks that many network operators have based their business models on today, and which allow for differentiation of service and product.

eircom would maintain that the current EU regulatory framework, with its emphasis on transparency, is sufficient to safeguard the open internet.

Question 7

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?

eircom does supply some exclusive content, however, it should be noted that this content traffic is not prioritised, indeed no content is prioritised on the network. However it is technically possible to prioritise some types of traffic and an example of this would be an 8Mb/s broadband access service, with 3Mb/s of high priority traffic. This would allow a 3Mb/s video stream to be delivered reliably.

In eircom's experience typically content providers don't use IP QoS on the public internet, practically all traffic on the public Internet is carried as best effort class of service. IP QoS has never been used to any significant extent on the public Internet and this is partly because there is no standard or agreement regarding the semantics of IP QoS markings eg a marking of '8' on one operator's network could mean high priority and on another network it could mean the opposite. However, content providers can use CDNs or private networks to try to better control the quality of their content delivery as discussed under Question 4 above.

It should be noted that within the operator's network the use of a commercial CDN does not normally impact content delivery as the CDN traffic is usually treated as best effort along with internet traffic. However it can bypass problems and congestion points on the public internet giving this content some level of advantage - at a cost to the content provider.

Question 8

In the case of managed services, should the same quality of service conditions and parameters be available to all content / 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?

eircom would maintain that exclusive agreements are necessary and are an established feature of the broadband market. Managed services are, by definition, exclusive to the interested parties and as competition law prevails, are already subject to stringent rules.

The provision of managed services is required from both a technical and commercial basis. From a purely technical point of view, the necessity to operate on this basis has already been discussed in depth in response to previous questions and is driven by network design. From a commercial point of view, however, the provision of managed and differentiated service provision must be appreciated as a positive dynamic of the market place, allowing for differentiated product provision.

A discussion on managed services should not, however, be restricted simply to retail product provision but should also appreciate the positive impact that superior quality of service at the wholesale level can have on overall commercial initiatives: the provision of which can have a positive impact on all parties. Such agreements are already subject to competition law, and whilst they are currently permitted it should be noted that they are not discriminatory and cannot be used to deny entry. eircom would maintain that such agreements allow operators to enhance broadband investment and overall take-up.

eircom would argue that no case exists for banning such services and would seek regulatory involvement only where there is seen to be a failure in the market.

Question 9

If the objective referred to in Question 8 is retained, are additional measures need 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?

eircom would maintain that no additional measures are required as standard terms and conditions under competition law would apply to all parties.

Question 10

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 is maintained? If not, how should they change?

eircom would argue that the current rules are adequate to ensure that the internet remains open and that infrastructure is maintained. What is important within this debate, however, is to guarantee a framework within which the market has the opportunity to adopt and evolve business models to provide for the development of new innovative services. With an evolving internet, operators will need to ensure that this ability is preserved.

The main issue to acknowledge is the relationships that need to evolve within the value chain, and the market structures that can realise service delivery. eircom would support, therefore, the argument outlined in detail in the ETNO response to this questionnaire whereby economic incentives on the side of the market where internet traffic originates, i.e. for content and internet service providers, may be required for a more efficient use of network capacity. This will include the flexibility to explore new business models of payments between internet content and application providers and network operators.

Question 11

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 cannot envisage instances that could trigger the need for intervention given that we operator in competitively functioning markets.

Article 22 of Directive 2002/22/EC as amended by Directive 2009/136/EC provides for national regulatory authorities to apply minimum quality of service requirements to services provided by an undertaking or undertakings. The article does, however, specify that before setting any such requirement the national regulatory authority

concerned shall provide the European Commission with a summary of the grounds for action, the envisaged requirements and the proposed course of action. The article also states that the Commission may make comments or recommendations to ensure that the envisaged requirements do not adversely affect the functioning of the internal market.

It should be noted that where a market is functioning competitively, the imposition of quality of service requirements could adversely impact the efficient functioning of the market, and therefore, eircom would argue that the impact of any such measure should be properly assessed in advance.

As highlighted throughout this response, the architecture of networks determines the level of service provision and this can range from a managed service whereby a guarantee is provided by the network operator to a “best efforts” provision, whereby service levels may vary. eircom would maintain, therefore, that seeking to impose minimum quality of service levels in a competitive market (which by its very nature will drive quality of service provision) should be subsidiary to the imposition of transparency obligations and or competition requirements.

Question 12

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

eircom would argue that it is very difficult to determine quality of service requirements and how to measure them. However, if such a method of intervention in the market were applied, then in advance a metric for monitoring quality of service need to be determined, and for such measures to be applied in a consistent way across all networks.

Question 13

In the case of 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 cooperation between NRAs to arrive at a common approach?

eircom would maintain that the imposition of quality of service requirements in an effectively competitive market would be counter-productive. The current framework based on principles of competition, network neutrality and stringent transparency provisions will provide the best basis on which to deliver quality service based offerings.

Question 14

What should transparency for consumers consist of? Should the standards currently applied be further improved?

Transparency is key to consumers being able to make an informed choice.

eircom is committed to providing our subscribers with clear information about how the connection is managed, efficient operation of the service, and the type of quality of end user experience offered. eircom will be working with the national regulatory authority to actively contribute to the implementation of the new regulatory framework's transparency requirements.

Question 15

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?

The impact of the Internet on social, economic and political engagement in society is profound. There is broad acceptance of the principle of intervention at a technical level to ensure that the network arrangements underpinning this engagement are effective and efficient.

A similar set of principles needs to be established to ensure to the greatest extent freedom of expression, media pluralism and cultural diversity. A core principle should be that legal and regulatory intervention occurs only when absolutely necessary and that such intervention should be proportionate and targeted.

Barriers to the development of the Internet as a democratic platform facilitating the exchange of ideas and lawful content should be resisted. As key stakeholders, Network operators and Internet Service providers will not interfere or take a position in relation to views expressed in any type or form of communication carried over the networks.

However other stakeholder in particular policy makers have a key role to play. Policy makers must ensure that intermediaries such as operators are not, by default, obliged through separate due process to take on the role of resolving problems related to the free-flow of ideas and content over the Internet.

The current problem of illegal copyright infringement is an example where the lack of a harmonised approach across the EU has resulted in a piecemeal development of solutions. These solutions – imposed in certain cases through the individual Member State legal process – are both costly burdens on the industry and liable to further challenge thereby failing to establish legal and regulatory certainty.

Solutions such as suspension of Internet access, raise serious constitutional concerns regarding privacy, proportionality, due process, and also free speech. The transposition of the current EU Telecommunications Regulatory Framework offers an opportunity for policy makers to take the lead in resolving this issue by establishing a fit-for-purpose regime that reasonably meets the requirements of all interested parties.