BEUC The European Consumer Organisation

The Consumer Voice in Europe

BEREC report on IP-interconnection in the context of Net Neutrality

BEUC statement

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Introduction

Net neutrality is one of the fundamental principles of the internet, which has allowed it to significantly enhance citizens' participation in society, access to knowledge and diversity, while promoting innovation, economic growth and democratic participation.

Defining net neutrality is of key importance in order to understand which underlying principles should be protected. From the consumer perspective, net neutrality is the principle that all electronic communication passing through a network is treated equally, independent of content, application, service, device, source or target.

In a neutral network, consumers[1] are entitled to:

1. An internet connection of the speed and reliability advertised to them.

2. An internet connection which enables them to:

    a. Send and receive content of their choice;
    b. Use services and run applications of their choice;
    c. Connect hardware and use software of their choice which do not harm the network;
    d. Use any communication method to reach any destination from any point on the internet without restrictions.

3. An internet connection which is free from discrimination as to the type of application, service or content.

4. Competition between network, application, service and content providers.

5. Know which network and traffic management practices are deployed by network providers.

Consumers rely on Internet Service Providers (ISPs) and telecoms operators to access this wealth of resources and applications. They expect ISPs to comply with the fundamental principles of openness, inter-operability and neutrality which constitute the foundations of the internet's architecture. They expect their internet connection to allow them to access any content they choose, from any point on the network.

Nevertheless, various parties, such as network operators providing end-user connections, challenge the neutral architecture of the internet when they undertake certain discriminatory activities, thereby also undermining users' rights. The European Union missed the opportunity to safeguard the neutrality of the internet in Europe during the revision of telecoms rules in 2009. By recognising the possibility for network providers to engage in traffic management as a default rule, the EU has opened the door to unfair and discriminatory traffic control of the internet.

The extent of the problem related to infringements of net neutrality by telecoms operators is accurately disclosed through BEREC's fact-finding exercise undertaken

[1] "Resolution on network neutrality", Transatlantic Consumer Dialogue, April 2010.

in early 2012[2]. For instance, BEREC's findings show, that one in every two Europeans may not have the option to use Voice-Over-Internet Protocol (VoIP) services on their mobile broadband service; that two in three Europeans may be subject to illegitimate discrimination of their internet connection due to their ISP's commercial decision to focus resources on specialised services; or that many ISPs are prioritising specific content as a general practice and especially during peak times.

BEUC believes that specialised or managed services should not be confused with Internet Access Services (IAS) which offer a connection to the public internet. We are concerned that the decision of ISPs to dedicate resources to specialised services is to the detriment of their Internet Access Services. Therefore, we strongly object to any activity related to an ISP's specialised service which influences the neutrality and Quality of Service (QoS) of an internet connection of an end-user.

Need for an EU legislative approach vis-à-vis Net Neutrality

BEUC has been consistently supportive of a legislative approach to net neutrality. Given the divergence of implementation by Member States of the new Telecoms Package, BEUC is continuously calling upon the European Commission to undertake further legislative action to ensure net neutrality is enshrined in law and to guarantee consistent implementation across all Member States.
Otherwise, the risk of divergent rules across Europe is very high. This would be contrary to the objective of the Digital Single Market and the nature of the internet as a borderless environment. Europe cannot afford to miss a second chance to safeguard net neutrality to the detriment of freedom of expression, consumer choice, innovation and competition. When considering policies which might affect the neutrality of the internet, the interests of consumers and users need to be safeguarded.

The crucial role for BEREC: need for more ambition

Whereas the European Commission must assume its responsibilities and respond to the calls by the European Parliament[3], the Economic and Social Committee[4], citizens' rights groups and consumer associations across Europe for the adoption of legislation specifically protecting net neutrality, the role of BEREC is crucial in ensuring a coherent approach among national regulators. BEREC's work on four different aspects of net neutrality – Quality of Service, Transparency, Competition and IP Interconnection – represent steps in the right direction and are much welcomed. However, BEREC must be more ambitious in regard to the interpretation of key provisions of the Telecoms Package, gathering evidence of net neutrality interferences and on the use of the powers conferred by the current legal framework.

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[2] "A view of traffic management and other practices resulting in restrictions to the open Internet in Europe", BEREC BoR (12) 30, 29 May, 2012.

[3] 'Resolution on the open Internet and net neutrality in Europe', European Parliament, 7 November, 2011.

[4] Opinion of the European Economic and Social Committee on the 'Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: The open internet and net neutrality in Europe'.

In order to ensure legal certainty, it is of utmost importance that certain key concepts are well defined. These definitions, together with a clear list of consumer rights related to net neutrality and a set of prohibited discriminatory activities for telecoms operators, should be the backbone of any legal instrument adopted to protect net neutrality. Establishing clear, well-defined concepts such as what are 'legitimate traffic management measures' are important to ensure all implementation measures at Member State level are coherent and there is clear legal certainty for consumers across the EU.

Every layer counts to restore and safeguard net neutrality

BEUC agrees that the most problematic deviations of net neutrality are occurring in the lower layers of the internet and specifically within the networks of providers of Internet Service Providers (ISPs) providing connectivity to end-users. As BEREC's findings show, numerous operators are using discriminatory traffic management techniques such as the blocking or throttling of specific services, seriously deviating from net neutrality. Nevertheless, it is very important to obviate the risks that the market structures, trends and dynamics of the interconnection layers pose to net neutrality as a whole, and specifically to the 'end to end' principle to which consumers are entitled.

Consumers are entitled to an internet connection which allows them to access any destination on the internet from any point of the network they choose to use, regardless of the application, service or protocol they are using. Therefore, interconnection agreements need to be carefully monitored to ensure that no architectural blockages are being created and that no matter which ISP a consumer opts for, they will be able to connect to all points on the internet.

The best effort approach needs to be safeguarded

Until recently, best effort networks have adequately respected the neutrality of networks and hence ensured that consumers can enjoy fully neutral access services to the internet. Multiple techniques have been developed to tackle congestion problems without amounting to illegitimate differentiation of content, classification of traffic or blockage of bandwidth-demanding applications and services.

Furthermore, the separation of network and application layers that is characteristic of the best effort internet has allowed for great freedom to create relationships between Content and Application Providers (CAP) and Content and Application Users (CAU) without involving the network operator. BEUC agrees with BEREC that this model has helped spur the level of competition and innovation in content, applications and services.

It is important that National Regulatory Authorities (NRAs) closely monitor interconnections, and where serious risks to net neutrality are discovered, use the powers conferred on them in Article 5 of the Access Directive5 in order to impose obligations on network operators and ISPs to interconnect their networks in an effort to ensure constant and healthy competition across all layers of the internet. This is seen as a precondition for retail markets to be capable of and then

[5] Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities.

incentivised to offer the full benefits of a best effort internet to end-users, particularly consumers.

Following the general views outlined above, what follows are precise answers to the questions asked by BEREC on its draft report on IP Interconnection. Only those questions which involve issues having a direct impact on consumers were answered.

1) **Are any other important players and/or relationships missing?**
   No, all relevant actors in the interconnection value chain have been adequately covered.

2) **Do you agree with the classifications of Content and Application Providers (CAPs) as outlined above?**
   Yes, although it is important to recognise the importance of end-users who predominantly act as CAUs, but by providing user-generated content to the internet through blogs and social networks, act as CAPs also. Therefore the distinction between the two is lessening.

3) **Do you agree with the classifications of Content and Application Users (CAUs) as outlined above?**
   Yes. As outlined above, BEUC agrees with BEREC that the separation of the network and application layers is the key element in enabling different types of end-users, e.g. small organisations and individual consumers, to provide innovative services and content.

4) **Do you agree with the classifications of Internet Service Providers (ISPs) as outlined above?**
   Yes, although BEUC does not share BEREC's view that retail internet access markets are "quite competitive". Rather, there are numerous Member States where consumer choice is either insufficient or there is no easy way to switch between providers, which in turn undermines the consumer benefits that competition can offer.

   Furthermore, specialised services raise serious concerns. They may contribute to lock-in situations, where consumers are pushed into long-term bundled contracts, including internet access and specialised services. These situations can impede consumers from switching easily if for instance they are dissatisfied with the internet access service provided.

5) **Do you agree with the classifications of Content Delivery Networks (CDNs) as outlined above?**
   Yes. In principle, Content Delivery Networks allow for a better Quality of Experience for consumers. They allow for the replication of content and reduce the total network distance which content must travel to reach the end-point. It is important to note though that caching comes with risks. It is very important that consumers always get up-to-date content when they are accessing mirror servers and therefore caching needs to be done in a way that all content is always updated downwards to the CDN's servers.

But CDNs also present challenges and risks from a consumer perspective. Where providers of CDNs integrate vertically into network providers and ISPs and also provide their own content and applications, they can actively discriminate among traffic by favouring and prioritising their own content, which is in violation of the principle of net neutrality. Therefore CDNs need to work in a content-agnostic manner, providing the content of their business partners in a non-discriminatory way.

Furthermore, CDNs may create competitive advantages for those CAPs who can afford using their services to the detriment of smaller CAPs who cannot. Therefore it is very important that this behaviour of CDNs is thoroughly monitored and analysed in order to ensure all content providers, be they consumers or small and medium sized companies, have equal opportunities to offer their content and services online.

6) **To what extent are requirements regarding traffic rations still important in free peering arrangements?**
N/A

7) **To what extent does the functioning of the peering market hinge on the competitiveness of the transit market?**
N/A

8) **Does an imbalance of traffic flows justify paid peering?**
N/A

9) **Does paid peering increase (number of contracts and volume handled under such contracts)?**
N/A

10) **To what extent does regional peering increase in relevance and affect transit services?**
N/A

11) **Are any important services missing from the list of services provided by Internet Exchange Points (IXPs)?**
N/A

12) **Are there any further developments regarding IXPs to be considered?**
N/A

13) **Should in future Europe evolve to have more decentralised IXPs closer to CAUs?**
Internet Exchange Points help network operators build economies of scale and reduce the distances traffic needs to travel to get to end-points. From a consumer perspective, IXPs represent an opportunity for network operators to find cost-efficiencies which in turn allow them to reduce retail prices.

Nevertheless, it is very important that IXPs are installed in a way in which they fully respect the net neutrality principle.

14) Will traffic classes ever become available in practice on a wide scale?

Traffic classes raise concerns because they create incentives to degrade the best effort internet in an anti-competitive manner and represent an eventual departure from this model of the internet. Operators seem to have had the possibility to offer them for over a decade and yet have not decided to do so before. We agree with BEREC that there is no sufficient justification for this paradigm shift in the way networks are operated and therefore we see no reason why the best effort approach should be abandoned.

As stated above, a best effort internet without illegitimate interference and discriminatory practices from ISPs results in a high quality of experience for consumers and should not be undermined by introducing traffic classes.

15) Will interconnection for specialised services be provided across networks?

N/A

16) Will other solutions for improving Quality of Experience like CDNs become more successful rather than traffic classes?

As stated above, although traffic classes may allow for the delivery of high quality specialised services, they represent an unacceptable departure from a best effort internet. CDNs on the other hand appear an important network architecture development which make a best effort internet more efficient.

Although as stated above, CDNs come with significant challenges which need to be tackled.

17) Which of the factors impacting on the regionalisation of traffic is most important: language, CDNs, direct peering?

N/A

18) Are any further issues missing?

N/A

19) Given the cost reductions and the economies of scale and scope observable in practice, why do network operators call for compensation?

Modifying the way in which the internet environment functions and significantly altering the value chain could offer network operators additional revenue, which we consider unjustified. As BEREC points out, at the interconnection level, the core of traffic is dealt with via free peering, and where transit is still being used, prices are declining. Therefore, we do not agree with the network operator industry's claim that there is an economic necessity to impose compensation costs for those CAPs whose content is distributed over their networks.

20) Do you subscribe to the view that CDNs lead to improvement of QoS without violating the best effort principle?

Yes, as long as net neutrality principles are fully safeguarded. CDNs allow for a quicker, more localised access to content, therefore bringing efficiency to the network. But in order to ensure that no deviations from net neutrality occur, a very competitive CDN market with little or no vertical integration is necessary. This is crucial to avoid discriminatory practices.

21) Is there a trend for CDNs to provide their own networks (i.e. integrating backwards)?

N/A

22) Is there a general tendency for eyeball ISPs to deploy their own transit capacities and long distance networks or even to become Tier-1 backbones?

N/A

23) If an eyeball ISP becomes Tier-1 provider, does this increase the eyeball's market power on the interconnection market because there are no alternative Tier-1 providers to reach the customers of this eyeball ISP?

N/A

24) Will Art. 5 become more relevant as some large eyeballs have equally qualified as Tier 1 providers not having to rely on transit anymore?

N/A

END