

## Comments on BEREC's Draft Report on An Assessment of IP-interconnection in the Context of Net Neutrality'

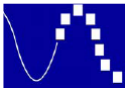
July 2012

### Preliminary Remarks

The Voice on the Net Coalition Europe ('VON') welcomes the opportunity to comment on the BEREC's public consultation on its draft Report on 'an assessment of IP-interconnection in the context of net neutrality' (hereafter 'the Report').

**VON agrees with many of the statements made in this Report and hopes that the following conclusions will also be included and taken into account in the final Report, as well as in the general reflexions made by BEREC, the European institutions and the NRAs on net neutrality and broadband investment:**

- **In terms of traffic and congestion** claims by some operators, this Report clearly demonstrates that *"while the absolute number of fixed broadband subscribers still increases, the rate of growth shows a slight decline"* (p. 30).
- **In terms of claimed requirements for investment** due to traffic increases by some operators, the Report equally comes to the following set of conclusions:
  - In core networks: *"Overall, in fixed networks the decrease in unit-costs is not overcompensated by the increase in volume implying that there is no substantial increase in overall costs"* (p. 34).
  - On mobile networks: *"Latest mobile technologies imply significant decreases in cost for a given capacity (...) Traffic volumes in mobile networks increase at a higher rate – however from a significant lower level in absolute terms – than in fixed networks. However, mobile operators respond to these traffic developments and to their relative capacity disadvantage compared to fixed networks by typically offering capped flat rates for mobile Internet usage while fixed operators (typically) offer unlimited flat rates"* (p. 34).
  - On the last mile: *"Generally, costs in the last mile are mainly driven by the number of users and not by traffic volumes"* (p.34).
  - The general conclusion hence being that *"summing up, the assumptions of many operators that costs are exploding due to traffic increases lose much of their seeming persuasiveness if cost developments on a per unit basis are looked at"* (p. 34).



- **And more generally, in terms of claims of free-riding** by over the top market players by some operators, the report clearly states that “CAPs make substantial payments for hosting and connectivity (...) Therefore different from what is sometimes alleged by some telcos in the Net Neutrality debate there seems to be no free-riding problem (...) BEREC conjectures that everything is covered and paid for in the Internet value chain (from content providers to the CAUs)” (p. 48).

VON urges BEREC to highlight the various statements made in this Report and highlighted above in a specific press release, so as to dispel once and for all some of the myths propagated by some access network operators.

### Detailed Remarks

**Question 2 (Chapter 2): Do you agree with the classification of CAPs as outlined above?**

**Question 3 (Chapter 2): Do you agree with the classifications of CAUs as outlined above?**

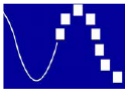
VON agrees with the classifications<sup>1</sup> as such in the context of this Report, but considers that one of the key points made by BEREC must be maintained throughout its work on net neutrality, namely the fact that under Art. 2 (n) FD “end-user means a user not providing public communications networks or publicly available electronic communications services” (p. 10) and that hence the CAP and CAU categories both fall under the generic ‘end-user’ label.

This means that when NRAs look at imposing QoS publication measures, for example, for the purpose of giving more transparency to end-users whilst monitoring any possible abusive traffic management practices, the level of detail of these QoS metric and parameters need to be considered from the perspective of what is useful to CAUs on the one hand, and what is useful to CAPs on the other.

**Question 5 (Chapter 2): Do you agree with the classifications of CDNs as outlined above?**

VON agrees with the fact that there are different types of CDNs in practice but urges BEREC and its members to be extremely cautious as regards the qualification of these CDNs from an electronic communications regulatory perspective.

<sup>1</sup> For the sake of clarity, VON agrees with the fact that “content and application providers (CAPs) create and aggregate content (e.g. webpages, blogs, movies/photos) [and] applications (e.g. search engines, messaging applications” and with the examples mentioned on p. 11. Conversely, VON agrees with the definition of CAUs as applying to “both, residential (private) users and business users of a broadband/Internet access in their function of passively consuming content” (p.12), read in conjunction with the clarifications provided on p.9, namely that “actual players will usually perform different combinations of functionalities (e.g. content and applications users may at the same time provide content and applications) along the value chain”.



The definition of an ECS/ECN should be interpreted in a manner that truly reflects the reality of the activity of a provider, and that takes into account the consequences beyond the application of traditional telecoms regulation of a given qualification.

After all, NRAs should not forget that the qualification as an ECS under European law implies that the provider has to comply with the Data retention Directive.

Looking at the analysis made by ARCEP and NPT on this matter, VON would side with NPT's conclusion that CDNs do not fall under the 'public communications network' category and that they do not qualify as an ECS. An interesting analysis is made by Lukas Feiler in his article on 'The Legality of the Data Retention Directive in Light of the Fundamental Rights to Privacy and Data Protection':<sup>2</sup>

*"Framework Directive article 2(c) requires that the service wholly or mainly consist in 'the conveyance of signals on electronic communications networks.' With respect to the Internet this definition only matches Internet access providers. Their service consists in the 'conveyance of signals' without any editorial control. Technically speaking, they provide services on the first three layers of the OSI Model: the physical layer, the data link layer, and the network layer.*

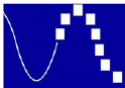
*Services provided over the Internet (as opposed to service providing access to the Internet) do not mainly consist 'in the conveyance of signals'- that is something left to Internet access providers. Services provided over the Internet use the last (or topmost) four layers of the OSI networking model: the application layer, the presentation layer, the session layer, and the transport layer. They do not concern themselves with the first three layers of the OSI Model, i.e. with the 'conveyance of signals.'*

**VON hence considers that BEREC should clarify in its final report that CDNs as such do not constitute either ECS or ECN.**

**Question 7 (Chapter 3): To what extent does the functioning of the peering market hinge on the competitiveness of the transit market?**

VON considers that BEREC has put a lot of resources (both in terms of time and effort) in analysing the IP-interconnect mechanisms and that, with the findings of this Report that no market failure is present, these resources should now be re-allocated to put an end to the many discriminatory behaviours identified in BEREC and the European Commission's findings from their joint

<sup>2</sup> See Feiler, L. (2010). The Legality of the Data Retention Directive in Light of the Fundamental Rights to Privacy and Data Protection. *European Journal of Law and Technology*, 1(3). Retrieved at, <http://ejlt.org/article/view/29/75>.



investigation, reflected in their 'View of Traffic Management and Other Practices Resulting in Restrictions to the open Internet in Europe'.<sup>3</sup>

In its 2011 Report on peering<sup>4</sup> presented jointly with BEREC in November 2011, the OECD pointed out that the peering market is efficient and competitive.

Moreover, in the explanatory note to the European Commission's Relevant Markets Recommendation, the Commission reached the following conclusions in the area of peering:

*"There are a number of differences between the typical arrangements for terminating calls on the public telephone network and delivering packets to destination addresses on the public Internet. In the latter case, end-users are implicitly paying to both send and receive packets. It is not automatically or typically the case that incoming traffic is charged for and that this charge is passed to the traffic sender via the sender's network. As indicated above, traffic connectivity can be arranged in a number of ways.*

*Entry barriers to this market are low and although there is evidence of economies of scale and that the ability to strike mutual traffic exchange (peering) agreements is helped by scale, this alone cannot be construed as inhibiting competition. Therefore (...) there is no a priori presumption that ex ante market analysis is required. Therefore, no market for wholesale Internet connectivity (or delivery of incoming packets) is identified for the purposes of the Recommendation."*<sup>5</sup>

Finally, as pointed out in the BEREC Report (p. 44, footnote 128), the Commission has clearly stated in the framework of a notification by the Polish NRA UKE<sup>6</sup> that the IP peering and transit markets did not require *ex ante* regulation as they are competitive. The Commission also pointed out that there was no reason to create two distinct markets that would differentiate between free peering on the one hand and paid-for IP transit on the other.

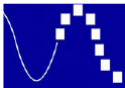
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<sup>3</sup> See BEREC. (2012). *A View of Traffic Management and Other Practices Resulting in Restrictions to the Open Internet in Europe – Findings from BEREC's and the European Commission's Joint Investigation* (BoR(12)30). Available at, [http://erg.eu.int/doc/consult/bor\\_12\\_30\\_tm-i\\_snapshot.pdf](http://erg.eu.int/doc/consult/bor_12_30_tm-i_snapshot.pdf).

<sup>4</sup> See OECD. (2011). *Internet Traffic Exchange: Market Developments and Policy Challenges* (OECD DSTI/ICCP/CISP(2011)2). Available at, <http://www.oecd.org>; and Dennis Weller. (2011, November 2). *IP Traffic Exchange Market Developments and Policy Challenges*. BEREC/OECD Seminar, Brussels, 2 November 2011. Retrieved at, <http://erg.ec.europa.eu/doc/berec/oecd/weller.pdf>.

<sup>5</sup> See European Commission. (2007). *Commission Staff Working Document – Explanatory Note – Accompanying document to the Commission Recommendation on Relevant Product and Service Markets* (SEC(2007) 1483 final). p. 37. Retrieved at, [http://ec.europa.eu/information\\_society/policy/ecomms/doc/library/proposals/sec2007\\_1483\\_final.pdf](http://ec.europa.eu/information_society/policy/ecomms/doc/library/proposals/sec2007_1483_final.pdf).

<sup>6</sup> See European Commission. (2010, March 3). *Commission Decision of 3 March 2010 Pursuant to Article 7(4) of Directive 2002/21/EC (Withdrawal of notified draft measures) – Case PL/2009/1019: The Wholesale National market for IP Traffic Exchange (IP transit) – Case PL/2009/1020: The Wholesale Market for IP Traffic Exchange (IP peering) with the Network of Telekomunikacja Polska S.A.*. Retrieved at, [http://circa.europa.eu/Public/irc/info/ecctf/library?/=poland/registered\\_notifications/pl20091019-1020/act\\_part1\\_v4pdf/EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/info/ecctf/library?/=poland/registered_notifications/pl20091019-1020/act_part1_v4pdf/EN_1.0_&a=d).



VON therefore encourages BEREC to focus its attention on the identified issues in the context on net neutrality, namely discriminatory practices that have commercial motivations (BEREC having demonstrated in this Report the fact that the claims of congestion, excessive costs and alleged free-riding by CAPs as put forward by some access network operators, rest on absolutely no evidence, quite the contrary).

VON would also like to draw to BEREC's attention some of the collateral 'damage' that can derive from blocking and filtering practices by one operator to networks in neighbouring countries. Indeed, on July 13, 2012, Ars Technica reported that "*researchers at the Citizen Lab at the Munk School of Global Affairs at the University of Toronto, revealed that some Oman Internet users using the Omantel ISP are also being subjected to Indian content restrictions because of traffic flowing through India*"<sup>7</sup>. This adds a whole new dimension to the possible impacts of unreasonable traffic management on society as a whole and CAUs/CAPs specifically.

**Question 19 (Chapter 4): Given the cost reductions and the economies of scale and scope observable in practice, why do network operators call for compensation?**

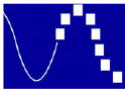
VON refers to its preliminary remarks as regards its full alignment with the analysis made by BEREC in Chapter 4 in terms of traffic growth, induced (lack of) costs and contribution by CAPs to the Internet value chain, notably as regards hosting and connectivity.

In terms of the motivation behind the network operators' call for compensation, VON can only advance a few speculative theories:

- When not challenged by facts and arguments as put forward in this Report, these claims seem to find some echo in political circles. Obviously, in a time of economic difficulties, claiming that one has financial trouble and needs help (be it in terms of subsidisation of networks or 'regulatory holiday' measures) is always worth trying and the question one could ask oneself is: why have the findings set out in this report by BEREC not been publicized in a meaningful way in the past, so as to put an end once and for all to some of the myths propagated by some access network operators over the last decade?
- These calls for compensation are now being echoed in fora beyond the European Union, as evidenced by the recent ETNO proposals<sup>8</sup> to review the ITRs in the framework of this year's

<sup>7</sup> See Farivar, C. (2012, July 13). Internet Content Blocking Travels Downstream, Affects Unwary Users. *Ars Technica*. Retrieved at, <http://arstechnica.com/tech-policy/2012/07/internet-content-blocking-travels-downstream-affects-unwary-users/>.

<sup>8</sup> See ETNO. (2012). *CWG-WCIT12 Contribution XX – Revision of the International Telecommunications Regulations – Proposals for High Level Principles to be Introduced in the ITRs*. Available at, <http://www.etno.be/LinkClick.aspx?fileticket=JIV9o5WEdsk%3d&tabid=2500>.



WCIT meeting of the ITU, which yet again try to ensure telcos “*obtain additional revenue from content and platform providers*”.<sup>9</sup>

**VON therefore urges BEREC to highlight the various statements made in this Report and reflected in our preliminary statement in a specific press release, so as to dispel once and for all some of the myths propagated by some access network operators.**

**Question 20 (Chapter 4): Do you subscribe to the view that CDNs lead to improvement of QoS without violating the best effort principle?**

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

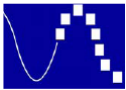
As recognized by BEREC in this Report, many CAPs have invested heavily in a network of data centres and high capacity backbone infrastructure to connect to the national internet exchanges and other traffic aggregation points around the world. In other words, CAPs are also investing in infrastructure, notably through CDNs.

**VON subscribes to the view that CDNs lead to an improvement of the quality of Internet for all CAUs without violating the best effort principle.** VON is aware that some access providers assert that CDNs are ‘non-neutral’ but we consider these allegations to be incorrect. The function of a CDN is to enhance users’ overall Internet experience by hosting and serving content from a location more proximate to end users, thus avoiding points of possible congestion and reducing latency. By definition, they do not and cannot involve or interfere with other traffic flows to end users.

Furthermore, unlike the routers in the last-mile broadband access network, where prioritizing is usually zero-sum (so that speeding some packets inherently means slowing others), there is no limit to the number of users that can enjoy the enhanced quality and speed that flow from CDNs and other content serving facilities. Indeed, CAPs ranging from start-ups and small businesses to large established players take advantage of these types of facilities, either directly or indirectly by purchasing services from specialist providers.<sup>10</sup> In other words, CAPs make their investment in data centre infrastructure available to third parties (e.g. Amazon, Google, Microsoft, etc.): anyone, including telcos, is welcome to take advantage of this to develop their own services for users.

<sup>9</sup> See for an analysis of these proposals CDT. (2012, June). *ETNO Proposal Threatens to Impair Access to Open, Global Internet*. Available at, [http://www.cdt.org/files/pdfs/CDT\\_Analysis\\_ETNO\\_Proposal.pdf](http://www.cdt.org/files/pdfs/CDT_Analysis_ETNO_Proposal.pdf).

<sup>10</sup> See, e.g., Mangalindan, M. (2008, January 15). Small Firms Tap Amazon’s Juice. *Wall Street Journal*. Available at, <http://online.wsj.com/article/SB120035205794189723.html> (discussing small businesses and start-ups using Amazon’s distributed content storage services to build their business).



As regards the Internet ecosystem, routers and servers are two entirely different things, and routing someone else's packets is not the same as storing your own data. Content aggregation and delivery facilities used by applications and content providers do not and cannot control the flow of Internet traffic to end users. This is why bottleneck access providers are properly at the heart of the net neutrality debate.

Bottleneck access providers' connections are still the *only* gateway users have to access everything else online; as a result of this unique place in the network, these providers can manipulate and interfere with users' Internet experience, including by determining whether users have access to certain content and applications at all.

**VON also notes that in some debates, access providers also mistakenly (or deliberately) conflate caching one's content with last-mile prioritization of all Internet traffic.**

Yet, as discussed above, CDNs allow CAPs to have their applications and content provided from a location that is more proximate to the end-user. However, neither CDNs, nor CAPs themselves, have the ability to interfere with the routing of other entities' traffic – they have no ability to make some packets go faster (which necessarily slows other packets) at the last-mile router, the critical area of control. In terms of ability to control end-user Internet traffic, there are sharp distinctions between last-mile broadband provider access and router control over all traffic on the one hand, and servers, CDNs, and aggregation facilities limited to one's own data on the other.

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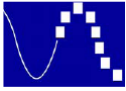
We thank you in advance for taking consideration of these views. Feel free to contact Herman Rucic, VON Europe, by phone (+32 (0)478 966701) or email ([hrucic@voneurope.eu](mailto:hrucic@voneurope.eu)) should you need further information.

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### **About the VON Coalition Europe**

The Voice on the Net (VON) Coalition Europe was launched in December 2007 by leading Internet communications and technology companies, on the cutting edge to create an authoritative voice for the Internet-enabled communications industry. Its current members are iBasis, Google, Microsoft, Skype, Viber, Vonage, Voxbone and WeePee.



The VON Coalition Europe notably focuses on educating and informing policymakers in the European Union and abroad in order to promote responsible government policies that enable innovation and the many benefits that Internet voice innovations can deliver.