



**BT's Response to BEREC Consultation:  
'An Assessment of IP-interconnection in the context of Net Neutrality'**

**31/07/2012**

# 1 Introduction

1. In the context of Net Neutrality, BT's response to BEREC's consultation defines IP interconnection as the interconnection of public Internet networks, taking the form of peering or transit.
2. BT has extensive settlement-free peering agreements under which it receives on average twice the level of traffic that it sends to other networks. BT's settlement free peering policy is published on its website and is based on objective, non-discriminatory and transparent criteria: <http://www.bt.net/info/peering.shtml>. BT does not use/offer paid peering. BT is also a Tier 2 transit provider with a limited customer base in Europe.
3. BT agrees with BEREC's view that the Internet ecosystem is complex and constantly evolving and welcomes the in-depth analysis proposed in this Consultation.
4. BT agrees that there is currently no legal basis for mandating any-to-any peering, nor any need for it. Indeed, BT believes that interconnection agreements should be driven commercially by market forces rather than ex ante regulation, and that where market forces fail, there are adequate ex-post Competition Law proceedings at national and EU levels to address any problems.
5. BT is not convinced that the analysis of economies of scale and scope underlying the discussion on network operator compensation is sufficiently researched. We believe ISPs and CAPS/CDNS should be free to strike commercial deals as to how traffic is delivered.
6. So far, BT has not seen a need for traffic classes across the public Internet. In any case, BT believes net neutrality does not exclude QoS, as long as it is transparent to CAUs.
7. Internet providers should be free to deploy techniques to manage congestion and optimise the performance of the various applications using the network. See BT position on the Open Internet.<sup>1</sup>
8. Finally, BT believes there is no evidence to suggest European eyeball ISPs are increasingly becoming Tier 1 providers. In any event, increased negotiating power from eyeball ISPs is unlikely to prevent interconnection, because an eyeball ISP needs to provide CAUs access to the whole Internet. CAUs' ability to switch ISPs would force the commercial resolution of any dispute, thereby ensuring interconnection is maintained.

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<sup>1</sup>[http://www.btplc.com/thegroup/regulatoryandpublicaffairs/europeanaffairs/briefings/bt\\_open\\_internet\\_may2011.pdf](http://www.btplc.com/thegroup/regulatoryandpublicaffairs/europeanaffairs/briefings/bt_open_internet_may2011.pdf).

## **BT's response to the consultation questions**

***Question 1 (Chapter 2): Are there any other players and/or relationships missing?***

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

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

***Question 4 (Chapter 2): Do you agree with the classifications of ISPs as outlined above?***

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

9. Chapter 2 provides a reasonable presentation of commercial relationships in the Internet 'eco-system' which is broadly sufficient for the purposes of this Consultation. As BEREK itself notes, any such presentation involves a degree of simplification, and there is considerable variation and overlap across the segments described. Furthermore, given the rapid evolution in this area we do not feel it necessary to comment further on the classifications provided.

***Question 6 (Chapter 3): To what extent are requirements regarding traffic ratios still important in free peering arrangements?***

10. As per its peering policy, BT believes the backbone cost associated with settlement-free peering traffic should be equitably shared. Regardless of the direction or type of traffic exchanged between the networks, the routing practices and location or interconnection points should be such that each party bears a reasonably equal share of the backbone costs. In the event that the nature of the traffic should change significantly subsequent to the initial interconnection, and result in an imbalance in the incurred network backbone costs between the two peers, BT believes the peers should renegotiate the interconnect placement, or such other means through which a new balance between the parties commercial interests can be struck.

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

***Question 10 (Chapter 3): To what extent does regional peering increase in relevance and affect transit services?***

11. BT believes that the traffic increase in the peering market, and in particular regional peering, makes the transit market more competitive.

***Question 8 (Chapter 3): Does an imbalance of traffic flows justify paid peering?***

12. BT considers paid peering is one of the ways to balance costs. However BT does not use/offer paid peering.

***Question 9 (Chapter 3): Does paid peering increase (number of contracts and volume handled under such contracts)?***

13. To BT's knowledge, although the number of paid peering settlements is increasing, paid peering traffic is increasing proportionally less than the overall traffic. In addition, BT understands that key players for content delivery do not generally engage in paid peering.

***Question 11 (Chapter 3): Are any important services missing from the list of services provided by IXPs?***

**Question 12 (Chapter 3): Are there any further developments regarding IXPs to be considered?**

14. BT agrees with BEREC's view.

**Question 13 (Chapter 3): Should in future Europe evolve to have more decentralised IXPs closer to CAUs?**

15. BT notes that the market is moving to regional IXPs. For example, LINX opened in April 2012 a new IXP in Manchester which is expected to improve the efficiency of traffic flows. (See <http://www.globalaxs.com/news>)

**Question 14 (Chapter 3): Will traffic classes ever become available in practice on a wide scale?**

**Question 15 (Chapter 3): Will interconnection for specialised services be provided across networks?**

16. So far, BT has not seen a need for traffic classes across the public Internet. However, were it to develop, we believe ISPs and content providers should be free to strike commercial deals. In BT's view, bitstream access is not part of IP interconnection and therefore outside the scope of this consultation.

**Question 16 (Chapter 3): Will other solutions for improving QoE like CDNs become more successful rather than traffic classes?**

17. BT believes a whole range of technical developments will support improvement in the QoE. One example is developments in OTT video encoding methodologies which will continue improving the customer experience.

**Question 17 (Chapter 4): Which of the factors impacting on the regionalisation of traffic is most important: language, CDNs, direct peering?**

18. Networks entering peering arrangements and present in multiple countries or continents usually require several peering points. This is to ensure that the traffic is exchanged optimally in the respective countries/continents, and to minimize the backbone cost. BT's peering policy (<http://www.bt.net/info/peering.shtml>) also requires peering points in several regions, where economically reasonable.

**Question 18 (Chapter 4): Are any further issues missing?**

19. BT agrees with BEREC's view.

**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?**

20. BT challenges several of the assumptions behind this question: we are not convinced that the analysis of economies of scale and scope is sufficiently researched. While some economies may be realisable it cannot be assumed that these off-set all costs associated with the increase in data flows. That said, BT does not see evidence of the 'explosion' in costs which the report attributes to the views of some operators.

21. We believe that ISPs and CAPs/CDNs should be free to strike commercial deals over how traffic is delivered. Rather than charging CAPs for IP interconnection, we believe ISPs can incentivise CAPs to use the Internet efficiently, for example through caching their content on ISPs' networks.

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

22. BT agrees that CDNs improve download speeds for everybody by easing congestion. BT also believes that eyeball ISPs should be free to strike commercial deals, should content owners want a higher quality, or assured service, delivery.

**Question 21 (Chapter 4): Is there a trend for CDNs to provide their own networks (i.e. integrating backwards)?**

23. In Europe, BT believes that pure CDNs continue to rely fully on ISPs to provide access to CAUs.

**Question 22 (Chapter 4): Is there a general tendency for eyeball (CAU) ISPs to deploy their own transit capacities and long distance networks or even Tier-1 backbones?**

24. No, BT believes that with decreasing transit prices, the economic case of building transit capacity is getting more difficult.

**Question 23 (Chapter 4): If an eyeball ISP becomes a Tier 1 provider, does this increase the eyeball's market power on the interconnection market because there are no alternatives Tier 1 providers to reach the customers of this eyeball ISP?**

**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?**

25. BT agrees that an eyeball ISP with a Tier 1 provider status would benefit from an increased negotiating power in IP interconnection arrangements. However, the application of Art. 5 is unlikely to become more relevant because CAUs' ability to switch ISPs would force the commercial resolution of any dispute, ensuring the interconnection is maintained. BT agrees that so far disputes have been commercially resolved between parties without any need for regulatory intervention.

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