



COMMENTS TO IDA'S CONSULTATION ON NET NEUTRALITY

BT welcomes IDA's consultation on net neutrality which comes timely with the realisation of the NGNBN together with the various Internet-related initiatives by IDA.

We note that the issue of net neutrality has become increasingly important for global policy makers from the ongoing and varied states of debate across the globe. BT with global footprints and whose home market is widely recognised as one of the world's most competitive, have shared with global policy makers our views on net neutrality which is in the context of broadband communications rather than the Internet.

We believe that regulatory intervention is unnecessary in truly competitive markets. A pre-condition to any discussion of net neutrality policy is a market review/analysis on both wholesale and retail markets. Where there is effective wholesale access there is likely to be competitive retail market. In a competitive retail market, broadband service providers should be free to offer additional and/or value added services to their customers, with or without traffic management, as long as the basic Internet service remains fit for purpose given the access network capability and service tier subscribed to by the customer. It would be inappropriate to set acceptable limits to discrimination or traffic management beyond the competition framework in consideration that sky is the limit for technologies and they evolve most rapidly. Network management practices may evolve depending on the future economics of the network and the evolution of demand for different applications.

Traffic management is necessary at various points in the network to—

- guarantee an appropriate experience for customers;
- offer a range of tariffs based on different levels and types of expected usage;
- control overall costs (network operators must be able to balance the cost of supply against demand for bandwidth); and
- ensure compliance with contractual terms and conditions.

Appropriate transparency in traffic management and reasonably straightforward migration between competing broadband service providers should allow the market to develop freely in response to changes on demand and supply without any need for traffic management regulations.

We are of the opinion that any discussion of net neutrality or potential traffic management regulations should be technology/market neutral and focus on public Internet service and not on additional broadband services or on business VPNs.



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BT has proposed the following set of principles or commitments for ISPs to their end-users for consideration of global policy makers–

Transparency – we will give customers meaningful information on their usage and on the network management techniques we deploy. We will provide an indication of the minimum and general level of experience our customers can expect – subject to their available access speed and the applications simultaneously using their connection.

Open access – customers should be able to use their Internet connection to access and run the content and applications of their choice (provided they are legal). We will not block any legal service or seek to charge content or applications providers for basic service. An individual user's experience will depend on the access level/technology purchased and any relevant contractual conditions.

Fair competition – A competitive market is the best way to protect everyone's interests rather than regulation. Customers should have a wide choice of internet access providers and should be able to switch between providers without penalty subject to their contracts.

Adaptable networks – Internet access providers should be free to deploy techniques to manage congestion and optimise the performance of the various applications using their networks. We may limit throughput of non time-critical applications in order to provide a better experience for all customers. We may also prioritise time-critical applications where this is necessary to deliver an acceptable performance. Network upgrading will be a continuous process in response to demand. A variety of commercial models will develop, some of which may include customers or application providers paying for enhanced capability, such as prioritised delivery.

Freedom of expression – We will not interfere with our customers' freedom of expression (other than as necessary to deal with legal requirements).

Commercial activity with no undue constraints to innovation – Internet actors should be free to develop new services and new business models which may differ from today's.

We note some similarities in our views highlighted above with IDA's policy approach towards net neutrality and we would agree with IDA that such policy approach may facilitate customers' access to content and services on the Internet, while providing flexibility for ISPs, network operators and Internet companies and content providers to differentiate their services for economic efficiencies and innovation.

With regards to setting of minimum broadband QoS requirements, we believe that in general customers should be able to select a service quality/price mix that suits their needs and QoS requirements should be left to the market. In a competitive market in which customers may switch between service providers in the event of a significantly detrimental change to their service there should be no need for regulatory intervention.



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Service providers may offer low cost services for customers who only need basic applications whilst offering services of high bandwidth and low latency for customers who are into online gaming, video conferencing, etc. Most customers are really only concerned with the performance of the applications which may be only loosely related to technical characteristics such as packet loss and latency.

The minimum standards for customers may change in both directions as their needs change from time to time. With the evolution of technologies and use of broadband, it will be difficult to specify and measure QoS. Speed measurements from the same service may vary due to differences in test conditions and methodologies. For any possible measurement it is technically challenging to understand where congestion is present in the network. While the access network can be the bottleneck, significant bottlenecks also arise in home networks, customers' computers, and Internet side systems and networks. With new and more sophisticated services such as 3D TV, HD Streaming, Gaming and HD conferencing which demands increasing bandwidth/speed, the quality of a broadband service may have to be measured on different metrics such as latency, jitter and packet loss. Service reliability and performance at peak times will become more important.

Competitive environment remains the key hence we would look forward to receiving updates and more information with regards to IDA's proposed regulatory enhancements, in particular towards increasing the competitiveness of the broadband market based on the market review/analysis from both wholesale and retail perspectives.

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