

1. Yes, there is an existing problem with net neutrality, for example in the mobile sector operators prevent fully free access to content like skype, also in the non mobile space the BT television offering is not available unless you apply to their network.

2. Problems could arise in the future where too many consumers end up rolled into one ISP through acquisition and end up being carried into situations where they are paying to assist in the creation of premium rate networks unavailable from other networks

3. I am not sure, it is possible it needs to be stronger and more consumer oriented.

4. Traffic management is very important on a network and should be allowed in order to provide non prejudicial congestion limitation. Where it is used to provide premium services the percentage of the network bandwidth dedicated to this use must be published for the prospective purchaser. It is carried out at the network layer using virtual networks and quality of service classes of traffic.

5. As mentioned in 4 above I feel that as long as the managed service offering is shown as a percentage of the total bandwidth and is shown not to impact on the remaining bandwidth for free and open internet use then if published it will give customers a good view of what they are paying for so should limit any net neutrality concerns. Though I do believe that an ISP should publish the same information for their peering partners so that a consumer can get a good view of the end to end picture otherwise a completely open best effort internet provider could be providing a service through a almost entirely premium rate network and thus limiting customer service.

6. Yes, A network is a network, the fee for bandwidth and availability is all that should change; pay more get more speed, pay more get bandwidth in more locations.

7. This is quite likely, take google phones using google features for example, this is not quite network related but suggests that prioritising certain aspects of content is happening. I would guess that the prime path for this happens through ISP partnerships and as such could be dealt with by ISP targeting rules. An example of this was when BT started to profile their customer data with the intent of offering content. I believe this was stopped.

8. So long as any partnership does not prejudice the free access of other such services I think that these partnerships should be allowed, that is to say if an ISP partners with google for example then they can provide a good connection from their network to google but not limit connections to googles competitors, thus improving the connection for the partner without changing the connection for the partners competitors.

9. More than likely yes additional measures will be required. Any such measures would need to be regulatory to ensure the consumer is protected.

10. I feel that existing commercial arrangements are fine and as long as there is transparency the market will right it's self and provide a network which all users can be happy with.

11. I do not feel that a minimum quality of service is required as if true transparency is offered in the marketing material then users can vote with their wallet and move to an ISP that can cope with their requirements.

12. So long as an ISP offers information regarding it's connectivity and rolling average network usage statistics (per core switch and peer connection) on a by weekly basis users will be able to tell if they are on a saturated network or not and can leave for better service if required.

13. Again I do not think NRAs should need to intervene if the users are provided with the information they need as the market will solve the problem.

14. Transparency should consist of network statistics and specifications in a simple format so that users can see the state of the network they are paying for, just like an IT department needs to know how their network is working so too do the people paying for the use of the ISP network. Yes the standards currently applied are not sufficient, when buying bandwidth from an ISP the information available is poor at best, more needs to be done to provide a better, standardised method for ISPs to offer information about what they are selling. Something like a simple colour coded diagram of the core network like the following:

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adsl users (you) ----- (Telecom backbone 76% usage (coloured orange))
----- (ADSL incoming concentrator 25% usage (coloured green))
----- (Core network 2% usage (coloured green))-----

-----|-(Peer 1 link - xyz network 1TB/s 85% usage (coloured red))
----- (Peer 1 aggregate* usage 70% (coloured orange))
      \-(Peer 2 link - abc network 500MB/s 2% usage (coloured green))
----- (Peer 2 aggregate* usage 99% (coloured red))
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*Aggregate usage is a weighted condensation of the above diagram from the peer network.

This diagram could be generated for each user with little additional infrastructure and thus include bandwidth figures for the full network as they affect the user. And even offer a best picture of the situation through to an end point like www.microsoft.com

15. I think the only place where there is a threat besides net neutrality is the rise of the power of software patents which are limiting the ability of internet users to write software which can be copyrighted for protection and does not need patent protection.

Regards,
Chris Lee