

Response to the Traffic Management and 'net neutrality' consultation

This response is in two parts: Part A contains my response to the consultation questions and part B my view on the consultation topic

(A) Response to questions:

(i) How enduring do you think congestion problems are likely to be on different networks and for different players?

ANS: For the next five years at least traffic demand is going to stay ever slightly ahead of the infrastructure to deliver it them.

Growth on mobile network is likely to be larger, mainly partly because it is still in its infancy, partly because mobile service providers are still suffering from overpaying spectrum license fees in the early 2000 and partly because they botched the first push on mobile internet in early 2000s by trying to built walled gardens that nobody wants.

(ii)What do you think are possible incentives for potentially unfair discrimination?

ANS: First and foremost, financial incentives. Market principles tells us that ISP would like to charge both parties in the two-sided market as much as each sides can bear. Discriminating against different traffics is one of the many tactics they can use.

Second, content providers with large pockets will try to use their financial position to strike deals with ISP to discriminate for their traffic at the expense of their competition. I am surprised that OfCom's consultation excluded this possibility.

Third, ISP who are also content providers use the fact that they are ISp to gain advantage against competition.

Fourth, political incentive to shape public opinion or to suppress dissenting opinions. Take for example President Obama's heavy use of internet for his elections, the flurry of edit/counter-edit on a candidate's wikipedia profile by campaigner, and to a lesser extent, the last UK election in May. While thankfully it is less serious in UK compared to other countries, the significance of this should not be underestimated.

(iii) Can you provide any evidence of economic and or consumer value generated by traffic management?

ANS: As discussed in paragraph 2.7, traffic management at peak time to ensure every user has a fair share is extremely good evident of consumer value.

(iv) Conversely, do you think that unconstrained traffic management has

**the potential for (or is already causing) consumer/citizen harm?
Please include any relevant evidence.**

ANS: Unconstrained traffic that hinders or block an VoIP call to emergency services, most likely in the form where although the call is patched through, both sides cannot understand each other due to congestion is absolutely unacceptable.

(v) Can you provide any evidence that allowing traffic management has a negative impact on innovation?

ANS: Development of Peer to Peer communication or P2P is hindered by traffic management. P2P is a useful tool in distributing software online, particularly to deal with the surge in demand when new version of popular, usually open source, softwares are released without the need for providers to resort to CDN or other practices. Even today, P2P can be still the fastest way for a consumer to obtain popular software at peak time.

(vi) Ofcom's preliminary view is that there is currently insufficient evidence to justify ex ante regulation to prohibit certain forms of traffic management. Are you aware of evidence that supports or contradicts this view?

ANS: At present, not yet. However, Ofcom should keep an eye on emerging area of Video-on-demand. In particular, OfCom should take note of ISP threats to limit the speed of BBC iPlayer when it first came out and when upgrade to the service impose more demands on ISP. This is particularly important if ISP are delivering their own rival Video-on-demand services.

(vii) Ofcom's preliminary view is that more should be done to increase consumer transparency around traffic management. Do you think doing so would sufficiently address any potential concerns and why?

ANS: Ideally traffic management should not be imposed and therefore the question of consumer transparency does not need to exists. Consumer transparency will also not help people at the fringe of the internet where they have no choice of providers.

If traffic management is to be imposed, then consumer transparency is paramount because OfCom is essentially rely on the consumers to be sophisticated enough to use the information available. In a market where true competition exists, i.e. multiple ISPs to choose from (not the two or three providers we see today), it will allow consumers to quickly eliminates ISPs that does not provide the service levels he wants.

(viii) Are you aware of any evidence that sheds light on peoples' ability to understand and act upon information they are given regarding traffic management?

ANS: OfCom surely remember the chaos and problems that arised when telephone calls were first deregulated in the consumer market. Slowly, but surely, Bad telecom providers, e.g., those that seeks to make money by short changing consumers died out.

Even today, the mobile phone market is full of confusing information, with so many different deals to consider. However, consumers still manages and those that try, including me, do end up get the best deal on offer. The operative word is "on offer"

(ix) How can information on traffic management be presented so that it is accessible and meaningful to consumers, both in understanding any restrictions on their existing offering, and in choosing between rival offerings? Can you give examples of useful approaches to informing consumers about complex issues, including from other sectors?

ANS: OfCom should set the standard instead of letting companies to set their own standards. There must be a set of standard information. This information must be relevant to the consumers, Example of useless information is 'up to XXX Mbps' nationwide. We need information about the place I am connecting my connection to. Finally, the information should comes in short, concise and easy to understand and compare format, e.g. a table.

The current market for mobile phones in the UK is a complex one with a lot of different deals. Almost all consumers seem to be able to navigate the complex landscape.

The nutritional content displayed on ready meals is a good example. It has flaws, but in general, works.

(x) How can compliance with transparency obligations best be verified?

By independent research done by or commissioned by OfCom. OfCom should consult all stake holders, including consumers, when commissioning the studies. Results of the research, from aims, methodology and conclusions, should be published. In particular, raw data should be made available to everyone without restriction to allow interested third parties, e.g., consumer magazines, to pour through it.

(xi) Under what circumstances do you think the imposition of a minimum quality of service would be appropriate and why?

ANS: The only circumstances where an imposition of a minimum quality of service is where limbs and life are threaten. At present, it means giving VoIP calls to emergency services a guaranteed quality for voice. In the future it might requires enough bandwidth for images and videos clip

transmitted as part of the call.

(B) View on traffic management and net neutrality

Thank you for the opportunity to comment on an important issue for the future of the internet.

As a means of background and introduction to myself, I am a resident in UK and my day job is programming and data handling for a leading university. It involves working with computers. I regularly download large datasets (>10GB) over the internet. I often use the internet in ways that I had not anticipated. I jokingly called the Internet 'the lecturer for all my programming language needs and my programming companion'. I am interested in the development of internet especially since it intertwines with my professional and personal interest.

Understandably, net neutrality means different thing to different people. Moreover, parties will try to inject what others will consider distinct and separate issues into the debate to advance their own interest.

In my view, internet service providers (ISPs) are the 21st century equivalent of Post Office, whose duty is simply to transfer messages from one place to another. Technically, while the closest possibly analogy for internet is the telephone network, but unlike the telephone cable which is capable of and expected to do only one or two things at once, the cable in which internet traffic travel through is capable of doing multiple things at the same time. This is where the challenge in managing and regulating the internet lies.

On an organization level, I think it is important to separate the role of ISP into messaging service and content provider. In the messaging service role, ISPs are commissioned by consumer to send a piece of his message from him to another person. In the content provider role, ISPs are generating content and then employ his other messaging role to send ISP's own message to the consumer.

I believe for the purpose of discussing net neutrality we must separate the two roles of ISPs clearly and only concentrates on ISPs duty and obligation to as messaging service provider. Where ISPs are also content providers, we will assume their content provision section hands over the data to be delivered messaging service section. It is of the utmost important that the messaging service section is independent of the content provision section.

As a messaging service, an ISP should be regulated just like a Post Office or Telecom: They cannot be held responsible for any illegal content that travels on their network in return for them not discriminating between different contents. The subject of illegal contents, regardless of whether is it heinous crime or copyright infringement, should be the subject of other legislation or discussion, not that of net neutrality.

I am not, as a matter of principle, oppose to the concept of traffic management. In the near term, e.g. next five years, I can see traffic management becoming more and more important as we as consumer impose more and more demand on the internet. Eventually, in the long run (greater than 10 years), I believe all discussion about traffic management is moot as traffic speed finally catch up with demand to allow what the history of communications had shown us time and time again, i.e. that the market will always prefer the provider that does not discriminate, all other things being equal. OfCom's responsibility is to make sure that until that day arrives, nobody can significantly distort the market to their favour.

I am, however, strongly oppose to traffic discrimination. To me, management means separating contents into different categories and manage them according to a policy regardless of originator/receiver. Discrimination means distinguishing between different originator/receiver and handles them differently, regardless of whether separation of content into categories was performed or not.

In its messaging role, ISPs should be expected to treat all message (data packet) equally, regardless of what the data packet is. This ideal is shattered by the fact congestion means some form of traffic management is needed to ensure everyone has their fair share of internet is acceptable and perhaps inevitable. During period of congestion, to not exploit the fact that data packets can be put into different categories and different categories can be treated differently is silly because it is a better way of managing the traffic. However, I will say that traffic management overstep the line into discrimination when the originator of the data packet or the receipt become a factor in deciding the speed of delivery.

In short, categorizing content into categories and managing them differently is acceptable to me as a consumer provided every traffic in the same category is treated equally. Changing my connection speed simply because of who I am, or who I am communicating to is not.

ISP must built a Chinese Wall between their service provider and messaging business. This means they are free to be content providers, provided as soon as the content leaves their content generation server and into the delivery network, it is treated no differently from the competitions.

Again, The best analogy I can think of to explain my position in the net neutrality debate is the Post Office. We use it to sent our mails and parcels (messaging services). Depending on what I sent (letter or parcel). I get different type of service (different service levels), and it also provides me with insurance, travel money and banking services (content provider). However, I do not expect and demand that it does not treat me differently because I did not use its insurance, travel money or other services or use one of its 'preferred' partners.

I have no problems with Content Delivery Network (CDN) provided traffic originated from them is not delivered in favour of contents from other means.

In my view, we should see ISP's content generation servers as CDNs. While it is true that contents for CDN, even assuming no traffic discrimination, would arrive 'faster' at the consumers' desk this is no difference say, content from a website located in a different county arriving slower than an international company with a website in the same town. CDNs is a way of managing traffic. ISPs are free to provide such services provided they do not exploit their role as messaging service. I believe CDNs can benefit both consumers and providers. However, I do not think ISPs should be able to discriminate against CDNs to their networks, or CDNs of other providers.

I believe traffic management can be beneficial to consumers, providers and ISPs alike. Any decision by OfCom on regulatory issue will in one way or another hinders certain practices in favour of others. I believe OfCom will arrive at the best compromise.

One particular field OfCom should keep an eye on is the field of mobile internet. Mobile network operators had botched their first attempt at creating a mobile internet back in early 2000s, by insisting on walled gardens. The introduction of iPhone a few years ago is a turning point that had and is continuing to undo this mistake. The severe lack of bandwidth to services mobile internet means companies, ISPs and other commercial companies alike, are jockeying for positions. Here is where traffic discrimination is most likely to occur.

We need to close the loophole where ISP signs deals with external content providers to advance their domination of the market to the point of no return. If anything, the time and effort needed to undo the Microsoft Windows's stranglehold on the PC sales market through exclusive deals in the 2000s is a lesson to us all.

If traffic management and/or traffic discrimination is going to be implemented by any ISPs, then we must ensure transparency to the consumers. Traffic management should be seen as a way ISPs differentiate their products from the competitions and not as something dirty that must be hidden from view. From a consumer point of view, it is easy to hide traffic discrimination as simply natural congestion from the net. Therefore, we want ISPs to be made to say 'Yes I discriminate/manage' publicly or we cannot make sound purchase decisions.

We also need independent verification of ISPs claim. Often, we are told that traffic management is there to prevent the 5% of customers from hogging the internet to the detriment of others and that the vast majority will not see the difference. From my point of view, why should the vast majority be subjected to the same treatment as the villains do?

The other bain is connection speed. 'Up to 50 Mbps' is useless if the ISP is not going to upgrade the local router to that speed in the lifetime of your contract. I believe the ISP should be required to disclose their actual broadband speed per geographical area. If traffic management is imposed, speed for different traffic must be provided.

I do not accept that providing providing real time information on traffic management is costly. To implement traffic management means the traffic is already monitored and measured. With today's technology, it is not a difficult job to pipe the information into websites. The information needed here are (1) the traffic volume for all users at the point measured against the ISP's capacity, (2) the speed(s) for each traffic categories and (3) a small archive, e.g. past three months, of the real time traffic data and how the traffic management affected them. The information provided here must reflect the that at the point where the traffic management policy is applied. These information must be made available to everyone, not subscribers only.

Even providing real time information of what the user actually used is relatively straightforward. To impose quota, this information is already collected. Again it is not difficult to put together a webpage and tag it with the subscription information website.

Finally, I would like to emphasize that I believe traffic management is not the solution to increasing web traffic demand. I believe that OfCom should ensure that traffic management, if performed by ISPs, is performed only for consumers' benefit and not that of ISPs or other providers. Business people likes to segment the market in order to charge the maximum the market can bear. To put up artificial barriers like traffic management simply to be able to legally charge more should be frowned upon. Traffic discrimination in particular, is hediously unfair.

P.S. I am not a Microsoft Office user and that piece of software does not work on my operating system. I had to jump through quite a few hurdle to get the document into the Microsoft Word Document. In the future, can I have the option of PDF or even better, plain text file?