Vodafone: many of the net neutrality fears are unfounded

The net neutrality debate has been an emotive one, concerning issues such as freedom of expression, innovation, discrimination and corporate motives. But there have been very few articles about how networks actually work and why it matters. In this article, Lisa Felton, Head of Consumer Policy and Content Standards at Vodafone Group Services Limited, explains her view that net neutrality needs to be grounded in an understanding of the underlying technology in order to achieve its aims of a better internet for all.

The 'Connected Continent' package was presented by the European Commission on 11 September 2013 and was intended to create a single market in communications technology. For the first time, the package included net neutrality rules. This was a sea change from the Commission's previous position, expressed in the Commission's Communication of 19 April 2011, entitled 'The Open Internet and net neutrality in Europe,' where the existing transparency and low switching costs were seen as sufficient to ensure customers could find the right service to meet their needs. The unstated reason for this change was the increasing pressure for national legislation on net neutrality, giving rise to a concern from the European Commission that this would result in a fragmented approach across Europe.

The net neutrality proposals introduced by the European Commission have steadily become more extreme during the European Parliamentary review process, culminating in the proposals approved by the European Parliament on 3 April 2014. Under these proposals, net neutrality is defined as 'the principle according to which all internet traffic is treated equally, without discrimination, restriction or interference, independently of its sender, recipient, type, content, device, service or application.'

There are many policy drivers behind the net neutrality proposals, for example the fear of internet speeds being degraded if operators sell faster speeds to companies, which then becomes a fear about a new type of digital divide where some users are relegated to a 'dirt road' internet. There is also a concern that speeding up some services may prevent innovative new services developing if new or start-up companies cannot afford to pay for such prioritisation. Finally there are privacy fears: fears that traffic is being manipulated and restricted without users' knowledge.

We have set out ten facts below which help to reset the debate by explaining why many of these fears are unfounded and how networks actually work.

Net neutrality could slow down the internet

The internet operates by providing the best service possible to customers - by proactively prioritising and optimising traffic based on where end users are, what device they are using and what type of traffic they request. Internet service providers use various techniques to optimise the performance of their networks - by compressing video data, for example, so it takes up less space (and costs customers less to use), by adjusting the video content so that it takes account of the size of screen and handset being used, and by only downloading what is being used, not entire files. But the net neutrality proposals only allow traffic management where there is temporary and exceptional congestion - which would mean in practice that videos and streamed content would buffer and quality would go down.

Specialised services can improve the quality of internet access services

A fundamental principle of the internet is that it involves the sharing of scarce resources and everybody gets to use the same infrastructure. There is an understandable concern that this means some people will lose out if others are favoured. The net neutrality answer to this is to build a separate network for special and faster services, which would be

disproportionately expensive and difficult to do in practice. The better answer is to build bigger networks, which can be shared - even if some services have priority at certain times as general internet users will benefit from using the spare capacity as well. Costs, and therefore prices, will be lower for everybody. Requiring internet access providers to operate logically separate networks means significantly higher costs, duplication of infrastructure and unused capacity.

Regulators want to incentivise operators to invest in new high speed, high capacity broadband infrastructure

If operators can charge application and services providers for higher quality, this produces more revenue which then drives more investment. Otherwise operators will be faced with the challenge of building networks, sharing them with new entrants at regulated prices and making them available for free to application providers that compete with them.

Net neutrality can reduce customer choice - and cause harm as a result

The idea that no websites can be blocked is incompatible with controls which allow parents to block over 18 content on their laptops and mobiles so that their children cannot access this content. It also does not allow internet access providers to continue with their voluntary approach of blocking child abuse material via the lists produced by the Internet Watch Foundation and others - which is collated based on reports by the public.

Everyone pays for video

Sandvine recently released a report on internet traffic called 'Global Internet Phenomena Report 1H2014' stating that Netflix alone now constitutes over 34% of downloading traffic in the evening in North America[1]. Usage patterns on the internet are undergoing a fundamental change. Net neutrality requirements would mean that consumers who wish to use the internet for very light applications (e.g. social networking) will have to subsidise internet users who are using bandwidth heavy services such as video, since there is limited possibility to create innovative new business models for these services.

Net neutrality will not enable innovation - it will reduce it

Networks - and software used on those networks - are constantly evolving. For example, there is a new technology that has been developed which moves content around to use 'dark spaces' or empty gaps in the network. Users cannot necessarily see this service but it makes a huge difference to their experience. In addition, innovative services such as remote health monitors, IPTV and high quality voice services, which rely on a guaranteed quality of service, will not be possible without building separate networks, which is likely to be prohibitively expensive.

Net neutrality can distort competition

The net neutrality arguments fail to recognise that traffic management takes place at every level of the internet. Providers of handsets, browsers, virtual marketplaces and other services such as Google, Microsoft, Nokia and others use traffic management to improve the delivery of their pages on the internet and to optimise third party content - using the same methods as internet access providers. Optimisation, caching, intelligent traffic management and providers of Content Delivery Networks have a business model based on obtaining revenues by improving quality of experience for end-users. The net neutrality proposals only address part of the value chain and if we are to ensure harm is prevented, any restrictions must apply equally to any company that can block access to websites or prioritise content.

The proposals will put EU companies at a disadvantage

The proposals are more restrictive than any existing net neutrality laws imposed in Europe or the US. This is particularly true in the mobile space - which should be a key driver of growth in Europe, but which is being held back through overregulation and uncertainty. The Navigant report published in 2013[2] highlighted that the EU mobile wireless market was falling behind the US: US speeds are 75% faster than the EU average, US consumers use nearly twice as much data and the level of wireless capex in the US has grown by over 70% since 2007, while declining in the EU. The proposed EU approach will stifle innovation in relation to performance and quality and hold back Europe even further. The internet is global and the innovation will move to parts of the world with more innovation friendly regulatory environments.

Net neutrality is almost impossible to implement

In practice, the net neutrality proposals, wherever they have been implemented, have been very difficult to interpret and enforce. In the US, they have struggled to define specialised services - despite setting up a joint industry and government committee to do so. In the Federal Communications Commission (FCC) Open Internet Advisory Committee report

entitled 'Specialised Services: Summary of Findings and Conclusions' they state that defining specialised services has 'proved difficult,' not least because of the multitude of ways in which the FCC itself has used the term. In the Netherlands, one year after the implementation of net neutrality legislation, a consultation on the definition of specialised services was launched and we are still awaiting the outcome. Regulators have struggled in particular with services where data is offered for free - while these appear to discriminate against other services, they are also clearly advantageous to the consumer and also mean that there is more data within a capped bundle to be used for third party services.

Consumers are more interested in their service working well than in understanding how it works
All telecoms operators are already required to disclose how they manage traffic to their customers. Simply adding to the existing requirements is likely to be counterproductive, as consumers are overwhelmed with more and more information. In September 2013, Ofcom published research which showed that despite most consumers understanding the traffic management information provided, there was a general lack of awareness of traffic management, with one in 10 internet consumers familiar with the term and only one per cent claiming to have considered this when choosing their broadband service[3]. What is needed is clear information about the speeds consumers can expect, any restrictions on what can be accessed and how to opt in and out of solutions such as parental controls and spam filters.

The FCC rules

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Faced with these issues, 'good' net neutrality rules seem almost impossible to define. However, it is worth looking at the proposals introduced by the FCC in the United States, in their new Notice of Proposed Rulemaking ('NPRM') published on 15 May 2014.

The FCC focuses on three main areas: transparency, no blocking and commercially reasonable agreements. In relation to transparency, the proposals build on the requirements previously set out in the law - sensibly extending information requirements to speeds, data caps and point of sale disclosure requirements as well as traffic management. The no blocking requirements are the same as the previous law - prohibiting fixed broadband providers from blocking lawful content and mobile providers from blocking competing services. The FCC also addresses the thorny issue of what a minimum level of access looks like, suggesting that this might be 'the typical speed' received by users. Broadband providers would be allowed to negotiate a 'better than typical' speed but prohibited from delivering 'worse than typical' service in the form of degradation or outright blocking. Finally, the FCC also creates a new mechanism to allow commercial differentiation, provided operators' conduct is commercially reasonable.

While the FCC requirements are not perfect, they do prevent discrimination whilst allowing differentiation. If implemented, they will encourage innovation in the US - at the same time as it is being stifled in Europe, despite the fact that there is less competition amongst internet service providers in the US. It is difficult to predict the right answers, but at least the FCC is asking the right questions.

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1. https://www.sandvine.com/trends/global-internet-phenomena/
2. http://www.gsmamobilewireless performance.com/GSMA_Mobile_Wireless_Performance_May2013.pdf
3. http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/1145655/traffic-research.pdf