

# Net Neutrality Questionnaire Responses

---

## Question 1

*Is there currently a problem of net neutrality and the openness of the internet in Europe? If so, illustrate with concrete examples. Where are the bottlenecks, if any? Is the problem such that it cannot be solved by the existing degree of competition in fixed and mobile access markets?*

A recent example is the Norwegian telecom operator Telenor, the former state monopoly, who kept the net infrastructure when being liberalised leading to “business models” where other ISPs will have to pay a nominal fee of about 8 Euros per month should the private subscriber not have a fixed phone line paying for the rental of copper to the nearest exchange. This has led to huge market dominance for Telenor in the private ADSL market. Only in larger cities do the subscribers have a choice, for instance cable TV companies, but the second largest actor is again owned by Telenor. In general terms it is thus fair to say that about 60% of the households connecting to the wired Internet connect through Telenor.

The content providers, however, often chooses smaller and more competitive ISPs charging less per bit transmitted. One of the major content providers is the Norwegian Public Broadcasting (NRK) hosted by a small ISP, BaneTele. This implies that content originating at BaneTele largely flows to the citizens hosted by Telenor. In 2007 Telenor withdrew from the Norwegian Internet eXchange (NIX)<sup>1</sup>, the backbone connecting all Norwegian ISPs, and Norway to the world, claiming that they would establish bilateral agreements with all the other ISPs for their traffic flows to and from Telenor’s network, so called *peering agreements*. In practice this would entail that BaneTele would have to pay a huge fee to Telenor since traffic mainly flowed from their net to Telenor’s net. The only way BaneTele could recover this additional cost would be to raise the fee for NRK leaving few possibilities:

1. NRK cuts their offering of multimedia content, typically streamed TV and radio.
2. NRK gets more governmental funding to cover the additional cost
3. NRK starts to charge the viewers for content that the citizens have already paid for over their tax bill.
4. NRK changed ISP to Telenor who could offer them a better deal than BaneTele as they would not have to pay another ISP in addition to the operational cost of their own network.

The second option would obviously not be available to commercial content providers like commercial TV channels and newspapers. The real alternative would of course be that Telenor raised their ADSL subscription fees to cover the increased operational cost for their network. However, this could shift more subscribers to alternative providers where available.

Fortunately, the issue got political attention, and created the public demand to split off the last-mile infrastructure from Telenor, as it was inherited public investment. Telenor, still majority owned by the state, backed down and renewed their agreement with the NIX. However, this raised public demand for political action to establish net neutrality by law<sup>2</sup>.

With flat rates offered in the mobile market, more people have started using 3G for data communication. However, building infrastructure in Norway is expensive, and although there is a third license held by the operator “3”, it will never be opened because of the cost of base stations to cover a sparsely populated area like Norway. The result is that the population is locked into a duopole of the two mobile operators

---

<sup>1</sup> [http://en.wikipedia.org/wiki/Telenor#Norwegian\\_Internet\\_Exchange](http://en.wikipedia.org/wiki/Telenor#Norwegian_Internet_Exchange)

<sup>2</sup> <http://www.dagbladet.no/kultur/2007/06/21/504166.html> (in Norwegian)

Telenor and Netcom that have no competitive incentives to reduce prices or increase the quality for their subscribers. With roaming costs applied for both voice and data traffic within Europe, citizens in one country will not subscribe to providers in other countries. This prevents the emergence of proper European wide providers, and at the same time allows the current local operators to refrain from upgrading technically their current networks with more capacity. In other words, the market mechanisms will not ensure improved bandwidth and better service as long as there is no truly European marketplace as small markets will not be of interest to larger players with a capacity to build infrastructure and press prices. The same effect is already seen in rural areas, exemplified with France, where only two operators offer coverage outside of the urban centres and GPRS is the best mobile data connectivity available in all towns with less than 50 000 inhabitants.

With increased demand for bandwidth, and insufficient capacity, they are in an ideal situation to argue the necessity of traffic prioritisation allowing them to sell “gold standard” to selected content providers willing to pay extra, at the expense of innovation.

This last point is illustrated with this summer’s information that Verizon and Google discuss a deal to offer prioritised access to YouTube. Imagine that such a prioritization was in effect, and someone else would like to offer a video distribution service. Entering the market would be impossible unless they had the financial strength to pay more than Google for the same or better quality. Thus, already large actors would be able to upkeep their position and lock out smaller players and start-ups.

Given the cost of digging new infrastructure and fibres to the homes, there is unlikely that new actors will enter the market as long as the IP based content is only “the web”. This has of course since long been realised by the cable TV operators when selecting other formats for distributing services like TV. NRK has since long offered streamed TV on demand, but HD quality is too demanding on their servers and on the bandwidth to allow point-to-point distribution. They are therefore successfully distributing their own produced content using BitTorrent, a protocol that is banned for instance in France validating the legal right to access content for Norwegian citizens staying in France.

## **Question 2**

*How might problems arise in future? Could these emerge in other parts of the internet value chain? What would the causes be?*

The above examples show that the future is already here. With the advent of smartphones like iPhone and Android based devices, more and more internet access is done via mobile networks provided that bandwidth allows efficient access. This trend is already observed in the US with the high penetration of smartphones, and in rural areas in countries where government regulations imposed coverage in the 3G licenses, like Norway, where the 3G connectivity is often better than what you can have with ADSL on a long copper line. The result is that the potential competition on wired connectivity is short circuited by the mobile operators, who can rightfully claim that bandwidth is limited by the physics of the electromagnetic spectrum allocation. Hence as the pipe for traffic can not be made any wider, they will claim it right that commercial traffic should be prioritised over other best effort traffic. Accepting this principle means accepting the ideas behind the above cited Verizon-Google agreement, with negative effects on innovation and on the right to free expressions. Nobody will consult a blog or a campaign website that takes minutes to load.

### **Question 3**

*Is the regulatory framework capable of dealing with the issues identified, including in relation to monitoring/assessment and subsequent enforcement?*

No.

### **Question 4**

*To what extent is traffic management necessary from an operators' point of view?*

It should not be necessary! As correctly identified by the introduction text to this question, the only viable alternative preserving the democratic Internet we have today is to ensure that sufficient capacity is available to meet demand. Traffic management should therefore be strictly regulated by law to give the network providers incentives to increase their capacity instead of making their available capacity more costly for users and content providers.

### **Question 5**

*To what extent will net neutrality concerns be allayed by the provision of transparent information to end users, which distinguishes between managed services on the one hand and services offering access to the public internet on a 'best efforts' basis, on the other?*

Information to the users will not make managed services any more acceptable. What is the option? Typically all mobile operators will ban VoIP. A typical business traveller has good bandwidth at work, and good bandwidth at home. Mobile Internet access is really only needed when travelling, but unlimited contracts only applies in the home country, abroad the traveller is left with expensive roaming. The alternative would be to buy "pay-per-use" access, typically in form of a USB modem, but as all operators ban VoIP there is really no choice. It does not help the traveller to know that it is banned from all.

As stated under Question 1, there is no real competition in the ADSL market as long as the one operator owns the copper to the house and charges others for using it. For the customer without a choice, it does not matter whether information is provided in the contract or not.

Finally, we should be aware that operators and others abuse their legal power to provide extensive contracts and regulations covering many pages in specialised language incomprehensible to the normal citizen. Thus, they will sign the contract to have access without properly reading all the legal terms. When the customer complains, their request is void because of the incomprehensible contract.

### **Question 6**

*Should the principles governing traffic management be the same for fixed and mobile networks?*

Yes, it should be disallowed. However, if one accepts the claim of the mobile operators that the electromagnetic spectrum restricts the necessary capacity increase, one might consider allowing some minimum traffic management on mobile networks – only – and on equal terms!

## Question 8

*In the case of managed services, should the same quality of service conditions and parameters be available to all content/application/online service providers which are in the same situation? May exclusive agreements between network operators and content/application/online service providers create problems for achieving that objective?*

The operators will always try to achieve exclusive agreements since they can be priced higher than non-exclusive agreements. The Verizon-Google attempted agreement shows that this is a real risk, and if that agreement is allowed, then providing a video-on-demand service outside of YouTube will imply that the majority of mobile users in the US would get a useless service. Thus, the only way to keep content competition, and content and service innovation, is to demand by law that all similar type applications should be treated the same. Of course, the operators will always find ways to argue that an apple is not an apple, leading to exhausting court cases only to be won by those with the largest budget for lawyers.

An illustration of how the lack of regulation will affect competitiveness is the recent popularisation of the smartphones led by Apple. The iPhone could never happen in Europe, simply because of the data traffic roaming across borders. A business traveller from New York does not pay roaming in San Francisco, but a person from Lille pays roaming when going to nearby Namur. For this reason continuous network connectivity was never on the agenda of European producers of handsets, with the effect that Nokia now faces serious problems. Thus instead of keeping the lead European industry had as handset manufacturers, all businesses are either sold out or struggling while the average European happily picks up her iPhone from her bag.

We are complaining that most of the service innovation happens in the US with examples like YouTube (estimated 30% of Internet traffic load) or Facebook (recently cited as the main reason to go on-line for the majority of Internet users). Different European languages and cultures is probably the main reason for the missing European equivalents, but making it harder to launch similar offerings will not help.

## Question 9

*If the objective referred to in Question 8 is retained, are additional measures needed to achieve it? If so, should such measures have a voluntary nature (such as, for example, an industry code of conduct) or a regulatory one?*

Regulation is the only way to ensure that same type of service receives the same traffic management. Industry can then define what *type of service* means and how to classify different services as this will change over time.

## Question 10

*Are the commercial arrangements that currently govern the provision of access to the internet adequate, in order to ensure that the internet remains open and that infrastructure investment is maintained? If not, how should they change?*

As the example given in the response to Question 1 shows, Telenor would essentially destroy the free flow of content if *peering agreements* are allowed as the way to handle business. The only way forward is for the politicians to realise that the digital infrastructure is as important as roads and railways for the digital economy, and that the high-capacity backbone needs to be a public service like the power grid. Insufficient bandwidth to the base stations is a cited reason for not building out 4G wireless, not customer demand. Thus most of the problems with capacity would vanish if all infrastructures could be considered equally important.

## Question 12

*How should quality of service requirements be determined, and how could they be monitored?*

This question is relevant only if one accepts the principle that traffic management is necessary. For the above argued reasons, it will be easy to ensure the sufficient capacity, and thus there is no need for additional, neutral monitoring authorities policing any QoS violations.

## Question 13

*In the case where NRAs find it necessary to intervene to impose minimum quality of service requirements, what form should they take, and to what extent should there be co-operation between NRAs to arrive at a common approach?*

In order not to repeat the above cited unfortunate situation with slow 3G uptake in Europe and no smartphones because of roaming fees on data access, this should not be left to the national regulatory authorities, but be regulated at European level. A single market with a single currency deserves a single regulation for the digital infrastructure.

## Question 15

*Besides the traffic management issues discussed above, are there any other concerns affecting freedom of expression, media pluralism and cultural diversity on the internet? If so, what further measures would be needed to safeguard those values?*

We are already seeing the nonsense of copyright laws preventing content produced in one country to be offered directly to clients in another country (“iTunes could *also* never happen here” syndrome), while on the other hand Europe wants cultural exchange and a single market. For instance the present respondent would like to buy French music on FNAC, which has a very good store for legally downloading music for 2€/song. This is not possible with a Norwegian credit card, but with my French card I can buy the music from the very same Norwegian IP address. Thus there is a need for a common copyright legislation making European content legally available to all European citizens at equal terms and at the same time. The alternative would be that premium service is exclusively taken by American media houses with a much larger single market and consequently more financial strength to outbid European actors whose financial basis is only one or a few countries (linguistic community), and we will all sink deeper into the American cultural dominance.

Another major concern should be the iPhone business model where services are taken off the Internet and made available only for iPhone users through an Apple approved application. Only expensive data access in Europe prevents this happening. The iPhone was already introduced in all markets as exclusive offerings of one operator, and eventually this would lead to an Apple controlled iNTERNet within the Internet. Commercial agreements between Apple and the exclusive reseller of iPhones could imply that traffic to and from “apps” were tagged and prioritised over other traffic, so that providers of services to mobile users should do this through “apps” and not through best-effort websites.