



To: traffic.management@ofcom.org.uk

September 2010

Skype comments on Ofcom discussion paper 'Traffic Management and Net Neutrality'

Skype Communications sarl (hereafter 'Skype', www.skype.com) is a Luxembourg-based provider of peer-to-peer software applications which enable Skype users to communicate with other Skype users, and enabling, optionally and where possible, certain forms of communication with the subscribers of electronic communications networks and services.

Please find hereby Skype's comments on the discussion paper prepared by Ofcom around both the subjects of traffic management and net neutrality.

Skype welcomes the opportunity given by Ofcom to comment on its discussion of an issue of crucial importance to the UK (and global) economy and society.

Summary of key points addressed in Skype's responses to OFCOM's specific questions:

1. Fostering the open Internet is a fundamental policy objective and is in accordance with OFCOM's statutory duties.
2. Concern over network congestion should not be used as an excuse for commercial discrimination.
3. Consumer and citizen harm through unconstrained traffic management is both evident and widespread in the UK mobile Internet access market.
4. *Ex post* approaches to tackling 'anti-competitive' practices and enhanced transparency measures are not sufficient to address the harm witnessed and the potential for even worse practices to develop.
5. In line with Article 8.4(g) of the Better Regulation Directive which mandates NRAs to promote "*the ability of end-users to access and distribute information or run applications and services of their choice*", Ofcom should apply a prohibition on harmful discrimination against specific content, application, source, origin, destination or protocol, stating explicitly that:
 - it is not acceptable for network access providers to block, degrade or surcharge the use and distribution of particular content, applications or services on the Internet;
 - traffic management practices can be deemed 'acceptable' or 'reasonable' if they can be explained as being relevant, proportionate, necessary, and non-discriminatory;
 - the extraction of payment for traffic delivery on the best efforts, global public Internet runs counter to overarching policy objectives, including the well-established objective of furthering the development of the open Internet.
 - traffic management techniques should also not be substitutes for an increase in capacity whenever possible: the authorities should protect the best efforts Internet from becoming a low speed, low capacity 'dirt road'.
6. A wider discussion involving relevant UK government departments and the whole stakeholder community should be organized. It is not for Ofcom alone to determine whether access to the open Internet is a pre-requisite for the UK's future economic and social wellbeing.

Specific remarks on Ofcom's Questions for discussion

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

There have always been capacity constraints in telecommunication networks. In the mobile world in particular, the last mile can be congested at times of unusually high demand. Even the traditional PSTN infrastructure can experience congestion, such as during peak times where it has been common practice for operators to 'drop' calls. However, there was never discrimination made between different types of callers or recipients. Management of the network capacity on purely technical grounds was deployed.

Technical and market developments are already starting to solve the issue of congestion in mobile networks. Many operators have embraced WiFi as a means to offload cellular data traffic and reduce costs and have been aggressively rolling out hotspots or striking partnerships to do the same¹. In addition, improved backhaul (Ethernet over fibre) and the LTE move to an all-IP mobile infrastructure will significantly help reduce congestion.

Paragraph 3.21 of the discussion paper also notes the trend towards ISPs providing their own 'CDN' solutions. This development points to the diversity of means with which congestion can be dealt with successfully without having recourse to discriminatory practices (further reducing any rationale for charging content providers for traffic delivery under the 2-sided markets theory mentioned elsewhere in the discussion paper).

Importantly, other European countries do not seem to encounter the backhaul bottleneck that is claimed to exist in the UK². Examples of best practice from around Europe include solving backhaul issues by, amongst other things, ensuring that there is access to dark fibre to create uncontended backhaul. Using dark fibre, running standard transmission equipment and speeds of up to 10/40/100 Gb/s can be obtained easily on a fibre pair, and the capacity of a fibre pair can be multiplied by 4-8 (CWDM) at very low cost and by 40-160 (DWDM) if needed.³ For the UK, the

¹ <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30433&mapcode=>

² For instance, see 'Italy Telco Regulator Urges Common Broadband Plan', *Dow Jones*, 6 July 2010: even if Chairman Calabro of Italy's AGCOM urged rapid action on wireless broadband, saying that the current mobile network risked collapsing due to the rising popularity of smartphones and the increase in data traffic, Telecom Italia's CEO was quick to dismiss the warning: "There is no such risk in Italy" Mr Bernabe said, adding that Telecom Italia, like other operators, is already addressing such concerns by upgrading mobile network infrastructure, <http://www.dowjones.de/site/2010/07/italy-telco-regulator-urges-common-broadband-plan.html>.

³ For instance, Swedish regulator PTS mandated 50km dark fibre backhaul from any point where local loop unbundling (Market 4 - copper and fibre) and wholesale broadband access (Market 5 - copper and fibre) is provided, on 24 May 2010, as an associated remedy to make competition on Markets 4 and 5 effective. (<http://www.pts.se/en-gb/News/Press-releases/2010/PTSs-decision-on-broadband-competition-will-guarantee-freedom-of-choice-for-consumers/>). In France, the regulatory authority ARCEP mandated dark fibre backhaul in the context of copper unbundling on 24 July 2008, as an ancillary obligation relating to its analysis of Market (http://www.arcep.fr/uploads/tx_gsavis/08-0835.pdf); Then on 27 July 2010, ARCEP issued a draft of a new decision on Markets 4 and 5, for consultation until 30 September 2010, confirming the previous approach. This includes a proposal to maintain and ameliorate FT's LFO fibre backhaul offer. ([http://www.arcep.fr/index.php?id=8571&tx_gsactualite_pi1\[uid\]=1300&tx_gsactualite_pi1\[annee\]=&tx_gsactualite_pi1\[theme\]=&tx_gsactualite_pi1\[motscle\]=&tx_gsactualite_pi1\[backID\]=26&cHash=9b3a71280c](http://www.arcep.fr/index.php?id=8571&tx_gsactualite_pi1[uid]=1300&tx_gsactualite_pi1[annee]=&tx_gsactualite_pi1[theme]=&tx_gsactualite_pi1[motscle]=&tx_gsactualite_pi1[backID]=26&cHash=9b3a71280c))

auction by the end of 2011 of 800 MHz and 2,5-2,69 GHz frequencies for delivering high speed mobile broadband has the potential to deliver capacity improvements and increased competition

Additionally, the introduction of Next Generation Networks will reduce the cost of both *adding* and *managing* capacity dramatically. Figure 4 (section 3.11) of the OFCOM discussion paper lacks a 'cost' curve that would show that the costs per bit incurred by operators will decrease dramatically over time. Network equipment producers are reassuring about the ability of telecom operators to upgrade their networks to provide high speed mobile broadband at minimum cost⁴. The wider benefits and investment rationale are similarly compelling: for fixed broadband, the OECD stated recently that the cost savings from just four sectors of the UK economy (transport, health, electricity and education) would justify the building of a national fibre to the home network.⁵

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

In our experience, discriminatory behaviour evidenced throughout Europe falls under two broad categories, both of which relate to commercial considerations by the operator.

- Certain applications are targeted that are either perceived as legally sensitive or bandwidth-hungry. Peer-to-peer applications and video services are routinely forbidden, for example. However, only a handful of peer-to-peer applications are bandwidth-hungry, and even fewer are associated with illegal activities such as illegal peer-to-peer file sharing.⁶
- Certain applications and services are targeted that are perceived by the operator to directly affect its voice revenues. For example, Skype and Voice over IP applications and services are regularly targeted by mobile operators⁷.

Such harmful behaviour is not well suited to being addressed by a traditional competition law approach. Two of the competition framework's key criteria for action are unable to address the problem: abuse can be conducted by operators who are not considered dominant and yet affect the whole of the Internet communication application ecosystem, and market definitions (rightly) do not equate unmanaged Internet communication applications with traditional voice services.

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

Some forms of traffic management have the capacity to create consumer value. They are designed to minimise network congestion at peak times and maximise the efficiency of network capacity.

⁴ Mobile Broadband with HSPA and LTE – capacity and cost aspects, Nokia Siemens Networks White Paper, May 2010 (<http://www.nokiasiemensnetworks.com/news-events/press-room/press-releases/mobile-broadband-business-is-self-sustainable>)

⁵ Network developments in support of innovation and user needs, OECD, 2009, www.oecd.org/sti

⁶ For example, "Unlimited mobile internet -subject to fair usage. Mobile internet is not to be used for other activities (e.g. using your handset as a modem, non-Orange internet based streaming services, voice or video over the internet, instant messaging, peer to peer file sharing)". From Orange UK *General Terms and Conditions*, http://shop.orange.co.uk/mobile-phones/terms#paym_animal_new (Last accessed: 29 July 2010, 10:15).

⁷ Alice Antheaume, « Panique sur la Neutralité du Net », *20 Minutes*, 22 September 2009.

Consumers benefit in terms of improved content and service delivery and, potentially, in terms of overall cost.

Equally, other forms of traffic management have the capacity to harm to citizens, consumers, government, businesses and the economy. The starting point should be to distinguish between “reasonable” and “unreasonable” forms of traffic management.

The revised EU Framework for Electronic Communications already clarifies that any measures restricting end-user access must be “*appropriate, proportionate and necessary*”⁸. It is our view that traffic management is reasonable when it is deployed in a targeted manner in order to improve the end-user experience – for technical reasons in temporary cases of network congestion – or to ensure the security and integrity of the network, again from a purely technical perspective, for instance when a virus risks affecting the network or its users.

There are suggestions in the report that certain quality-sensitive applications would not be possible without traffic management (gaming is cited as an example in section 4.12). However, this contrasts with Ofcom’s own observation elsewhere concerning video which found that “*[v]ideo traffic could be accommodated by increasing the total bandwidth available, and it is not essential to deploy advanced technologies to prioritise video traffic over other types of traffic in order to ensure a high QoS for video services*”⁹.

There is already a growing body of regulatory good practice available on what is considered reasonable traffic management. These practices enable regulators to guide and give flexibility to operators, by explaining clearly what is deemed acceptable, without regulators having to develop in-depth technical specifications for instance on which type of content or applications should be prioritised in times of congestion, a method which would need regular updating and would likely not to be easy to devise or to enforce.

We would point Ofcom in particular to the Canadian regulator CRTC’s decision, which posited a clear and future-proof scope of what constitutes appropriate traffic management practices, and also highlighted that “*[adding] capacity should always prevail*”. When concerns arise over traffic management practices, the CRTC decided that ISPs, whether wired or wireless, should demonstrate in particular “*the need for [Internet Traffic Management] and its purpose and effect, and identify whether or not the ITMP results in discrimination or preference; [...] In the case of an ITMP [Internet Traffic Management Practice] that results in any degree of discrimination or preference: demonstrate that the ITMP is designed to address the need and achieve the purpose and effect in question, and nothing else; establish that the ITMP results in discrimination or preference as little as reasonably possible; demonstrate that any harm to a secondary ISP, end-user, or any other person is as little as reasonably possible; and explain why, in the case of a technical ITMP, network investment or economic approaches alone would not reasonably address the need and effectively achieve the same purpose as the ITMP.*”¹⁰

The French regulator ARCEP also simply scoped the appropriateness of traffic management as follows: “*[ARCEP] recommends that the traffic management practices that ISPs employ to ensure*

⁸ Article 1.3, Framework Directive 2009/140/EC.

⁹ Ofcom / Analysys Mason, *Ibid.* <http://stakeholders.ofcom.org.uk/market-data-research/technology-research/research/emerging-tech/hqvs/>

¹⁰ CRTC Telecom Regulatory Policy CRTC 2009-657, *Review of the Internet traffic management practices of Internet service providers*, October 21, 2009, <http://www.crtc.gc.ca/eng/archive/2009/2009-657.htm> and <http://www.crtc.gc.ca/eng/archive/2010/2010-445.htm>.

*Internet access remain exceptional and comply with the general principles of **relevance, proportionality, efficiency, transparency and non discrimination***¹¹. The details it gives on each qualification are also very helpful to scope what practices are acceptable, such as what is seen as ‘non-discriminatory’, which “*means that streams with comparable technical properties must be treated in an equivalent fashion. The particular goal is to prevent an ISP from favouring its partners’ content/services/ applications (or its own if it is vertically integrated) over those supplied by others, as this type of preferential treatment must be reserved for managed services only, and cannot apply to Internet access.*”¹²

Certain types of discrimination beyond considerations related to reasonable traffic management are inherently harmful. Arbitrary discrimination against certain applications and protocols that do not impose an unduly heavy load on the network should not be deemed legitimate. As ARCEP noted for example, “*within specific technological environments, and particularly on mobile networks, although the overall goal must prevail, it nonetheless seems acceptable for mobile operators to restrict access to certain sites or applications for objective, non-discriminatory and justified reasons [...] this type of constricting practice must nevertheless only be possible when it satisfies real technical imperatives, and can never involve banning or blocking an application or a protocol (including voice over IP, peer-to-peer or streaming), nor must it act as a substitute for investing in increasing network capacity, which is the solution that must prevail in the medium term.*” On VoIP specifically, ARCEP added that “*even in data offers that are not qualified as “Internet access,” it does not seem legitimate to block voice over IP services (such as Skype) since they do not consume more bandwidth than other services that are currently accessible via mobile networks.*”¹³

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.

Consumer and citizen harm through unconstrained traffic management is both in evidence and widespread in the UK market for mobile access to the Internet.

The “*ability of end-users to access and distribute information or run applications and services of their choice*”, which national regulatory authorities are bound to promote under Article 8.4(g) of the revised Framework Directive for electronic communications 2009/140/EC, is already being severely constrained in the UK.

Restrictions as to what end-users can do are particularly extensive in relation to mobile access to the Internet in the UK. Three out of five UK mobile operators impose wide-ranging restrictions. This harmful behaviour takes the form of either straightforward prohibition and/or over-charging for use of certain applications and services, such as VoIP, P2P and streaming services.

Note that OFCOM is already duty-bound to remove barriers to the development of VoIP under the EU Roaming Regulation 2009, which stipulates that “*...there should be no obstacles to the emergence of applications or technologies [...] such as Wi-Fi, Voice over Internet Protocol (VoIP) and Instant Messaging services.*”¹⁴

¹¹ ARCEP consultation *Discussion points and initial policy directions on Internet and network neutrality*, May 2010, English version; http://www.arcep.fr/uploads/tx_gspublication/consult-net-neutralite-200510-ENG.pdf.

¹² ARCEP, *Ibid*, page 18.

¹³ ARCEP, *Ibid*, pages 33 and 19.

¹⁴ Article 40. The full text of the regulation can be found here:

A recent in-house analysis of mobile Internet access conditions in the UK confirms that end-users' access to online services and applications, irrespective of their bandwidth or other technical demands, depends on the operators' attitude towards these services and applications from a commercial perspective. For example, Skype is subject to prohibition and/or over-charging by several operators, even though it is not a bandwidth hungry application, nor one that is difficult for a network to handle: a typical Skype call consumes on average 6-20 kbps, or the equivalent of downloading a normal webpage.

Finally, restrictions to citizens' ability to access and use information, express themselves and communicate online clearly run counter to fundamental freedoms enshrined in the Human Rights Act. Such restrictions seem to be routinely applied in the UK, notably by mobile network operators.

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

Unconstrained traffic management is already having a negative impact on innovation, both in the ICT sector and in the wider economy. This is because this form of traffic management, rather than being driven by a need to solve legitimate network issues, is commercially motivated (to harm perceived competition, or to aim to extract revenues from Internet companies on account of controlling users' access). This is exactly the kind of practice conducted "*out of commercial motivation*" which EU Commissioner Kroes described as being a '*no go*' during her approval hearings in the European Parliament.

The practices of blocking, degrading or charging more for the delivery of certain content; or putting pressure on device manufacturers so that certain applications and services are not usable on their devices¹⁵ – are all barriers to innovation. The Internet and its ecosystem of applications and services have been successful in fostering innovation thus far thanks to a guiding principle of non-discrimination. Any citizen, business, organisation or government department is able to develop Internet content, services and applications for worldwide consumption. There is no need to seek prior permission, enabling innovations to be launched online easily.. This is the underpinning to the virtuous cycle of online innovation we have known in the past twenty years, which sees innovative online content, applications and services generate renewed consumer demand for Internet access, itself providing return for investment in networks. Disturbing this fundamental 'rule of the game' behind the Internet economy's success could have serious and negative consequences far beyond the ICT value chain, and for operators themselves.

Providers of online applications and services make investment decisions on the understanding that their product or service is discoverable by, and may be used by, any Internet user. Projections, investment, research & development, and marketing decisions are made on this basis. It is already objectively the case that the UK is losing existing Internet innovators and investment to countries with more conducive policy frameworks or failing to attract them in the first place. Far from its position a decade ago as a leader in Internet innovation, the UK is fast becoming a back-water. Official statistics show that foreign direct investment in ICT in the UK has steadily declined in

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:167:0012:0023:EN:PDF>

¹⁵ For example, pressure on Nokia by operators to remove VoIP functionality from their N95 devices in the UK was well publicised in the UK and European press. Apple is also obligated to request, in its 'Software Development Kit', that app developers use for the iPhone to refrain from releasing certain new products or features that may be prohibited by 'some network operators'.

recent years, from about 10% of all FDI projects in 2007 down to just over 6% last year, with the number of new e-commerce projects in particular halving over the past couple of years. This downward trend was accompanied by news that some of the largest Internet companies were relocating their European headquarters away from the UK.¹⁶

It would be neither desirable, nor timely, to give ‘carte blanche’ to access network operators to start charging online businesses for traffic delivery or allowing them to arbitrarily block or otherwise hinder access to any lawful content, applications or services and/or users’ ability to distribute such content, applications and services.

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?

As we have already described, we believe there is sufficient evidence to demonstrate that neither *ex post* approaches to tackling ‘anti-competitive’ practices nor enhanced transparency measures are alone sufficient to tackle the harm already witnessed in the UK. Fully competitive outcomes will not result from focusing on the promotion of competition solely at the lower levels of the value chain.

In spite of the existence of multiple independent underlying infrastructures, the mobile retail market exhibits characteristics that do not reflect an effectively competitive market, and often fails to offer consumers a meaningful choice. Many mobile network operators, including all GSM/UMTS operators in several EU Member States, have decided to adopt technical and/or contractual conditions preventing users from using VoIP and P2P applications, and certain forms of utilisation are otherwise impeded or subject to unjustified additional retail tariffs. Whilst such discrimination may not be the case for all subscription packages of all mobile network operators in the UK today, it is clear that a wide range of unjustified restrictions already exist at the retail level. Their existence has not been mitigated by the mere presence of a certain number of providers at lower levels in the value chain.

Potentially all network operators share the same incentive to block certain applications — for example, voice calling software that operators believe could threaten their legacy revenue models — giving consumers no meaningful choice to use otherwise social welfare-enhancing applications. Second, competition is effective in discouraging discriminatory network operator practices only if consumers are well-informed and if they are able to switch provider easily. In this case, consumers may not realise that network operators are interfering with a particular application and even if they did, they may not be able to sufficiently incentivised or enabled to switch provider.

So far as competition law is concerned, it is dependent on the qualification of an abuser as having ‘a dominant market position’, or on collusion having taken place, and on very narrow definition of what constitutes a ‘market’ where abuse may have taken place. No individual company has been declared or found to be dominant in the UK retail fixed and mobile Internet access markets. There is, however, widespread behaviour by mobile network operators controlling the overwhelming

¹⁶ See UKTI’s *UK inward investment report 2009-10* and its predecessors, <http://www.ukti.gov.uk/export/exporthome/search.html?x=34&y=1&search=statistics&x=0&y=0&informationType=informationtype%3A%2Fnews%2Fnewsarticle§or=%2Fict&country=-1&focusOn=-1>

majority of the mobile retail market, that amounts to impeding the use of P2P, VoIP and other applications – which is harmful and which competition law is unable to adequately address.

Looking specifically at ‘significant market power’, Ofcom states in Section 1.11 that discriminatory behaviour is only a potential issue “*where firms have substantial ‘market power’ and could discriminate in favour of their own services*”. We posit that there should be a recognition that beyond ‘anti-competitive’ practices in the narrow sense of competition law, traffic management can be used arbitrarily by any ISP, irrespective of whether they have significant market power, to benefit one of its revenue streams through its control of the Internet access bottleneck, through what Ofcom elsewhere calls “*exclusionary behaviour*”¹⁷. Further, as explained by Dr. Barbara van Schewick of Stanford Law School¹⁸, network operators have common incentives to discriminate against third parties, which are not necessarily addressed by increased infrastructure-based competition. Further evidence can be found in the draft TERA study for the European Commission¹⁹, which also recognises the shortcomings of the SMP approach in such cases, because the main risk of harm in its opinion would likely lie at the ‘last mile’ and possibly the backhaul segment where the end-user’s network operator has bottleneck control over users’ Internet access and can therefore dictate the conditions of both the delivery and the origination of traffic: “*To use the example of a famous video sharing platform, it is always the user who “calls” YouTube, never the contrary. It could be argued therefore that the Internet access provider applies a Calling Party Pays regime in its relations with the Internet user. As the “calling party”, the Internet user bears the full cost of the communication on the access network.*”

Further, the revised European legislation infers that an *ex ante* protection of the open Internet principle should apply. Art. 22 (3) of the Citizens’ Rights Directive stipulates that “*In order to prevent the degradation of service and the hindering or slowing down of traffic over networks, Member States shall ensure that national regulatory authorities are able to set minimum quality of service requirements on an undertaking or undertakings providing public communications networks.*” The use of the term “prevent” indicates that under EU law, any action undertaken by Ofcom in this field should occur *ex ante* rather than *ex post*.

Evidence from other markets suggests an *ex ante* approach to defining when traffic management practices are acceptable or not, and irrespective of the presence or absence of market power, is increasingly the norm, rather than the exception. Japan, Norway, Canada and France are instructive in this regard and we recommend OFCOM takes time to study *ex ante* approaches in those markets.

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?

Increased transparency, while desirable, is insufficient to prevent arbitrary blocking and discrimination against unaffiliated content, applications and services by network operators.

In addition to increased transparency, non-discrimination rules to preserve the openness of the Internet are needed so as to protect innovation and consumer choice. Indeed, transparency can only

¹⁷ Section 4.13, page 26 of the discussion paper.

¹⁸ Barbara van Schewick, *Toward and Economic Framework for Network Neutrality Regulation*, 5 J. on Telecomm. & High Tech. L. 329, 370 (2007).

¹⁹ <http://www.teraconsultants.fr/assets/publications/PDF/2009-70-MR-draft-final-study%28consult%29.pdf>, page 36.

be used as a substitute for a specific rule (here, non-discriminatory access to the Internet) if it inspires and enables consumers to switch providers and thereby affects market behaviour for the better. We do not believe this can happen in isolation.

First, even if consumers were well informed as to the closed practices of wireless networks, such transparency would be largely ineffective, since high barriers to switching would remain. Examples include early termination fees, handset exclusivity practices, bundling of handsets and service contracts, non-portability of emails supplied by and tied to the operator, residual number porting issues, etc. Given the cost, time and effort involved, a consumer may (even if aware of the initial restrictions they are affected by) decide that the switching costs exceed the loss in utility of the closed network, but the loss in utility remains — as does the discriminatory effect on the market for innovative third-party applications, services, and devices.

Consumers do not have the possibility to '*punish attempts at exclusionary behaviour by simply shifting their business*' (as suggested in paragraph 4.18) due to the continuing high switching costs they face with regard to mobile Internet access. The difficulty in switching was evidenced already by Ofcom in 2007 having to intervene with a new General condition to facilitate customers being able to switch providers easily (Ofcom General Condition 22: Service Migrations), and significant deficiencies remain: Ofcom's *Consumer Experience Report 2009* further reported that switching by both household and business consumers in the mobile, fixed, and Internet sectors was far lower than in many other sectors such as electricity, gas or car insurance²⁰. The European Regulators' Group / BEREC also has had to continue its working group on switching for yet another session due to the persistent consumer harm faced in this area.

The perverse effects of a reliance on transparency provisions can be seen in Sweden. Until last year all mobile network operators offered access to the full, unrestricted Internet. Since the beginning of this year when the regulator (PTS) pronounced itself in favour of transparency as the sole safeguard for the open Internet, both leading mobile operators introduced restrictions on users' ability to use VoIP²¹.

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?

There is research which suggests that (contrary to what is inferred in paragraphs 5.14-5.16) consumers are (i) not aware of restrictions and (ii) that they are not mostly concerned about broadband speeds. In fact, most consumers in other surveys in the UK and other EU countries demonstrate that they are most often not properly informed about restrictions, and that the overwhelming majority do not accept restrictions.

As evidenced for instance in *Consumer Focus*' review of mobile and related studies²², users want choice between Internet access providers, the ability to choose freely what they are able to view and

²⁰ Ofcom: The Consumer Experience Report 2009, pages 99-111, <http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/research09.pdf>.

²¹ See Telia Sonera's and Telenor's Terms and Conditions here : https://www.tewss.telia.se/privat/produkter_tjanster/mobilt/surfaimobilen/?sl=privat_produkter_tjanster_mobilt_surfaimobilen and <http://www.telenor.se/privat/abonnemang/tillaggstjanster/alla-mobiltjanster.html#C45-2100-P45-5468>.

²² 'Consumer Focus priorities in the mobile phone sector', <http://www.consumerfocus.org.uk/assets/1/files/2009/11/ConsumerFocusprioritiesinthemobilephonesector>

disseminate online, predictable prices, value for money, the right to switch easily and so on. Importantly, they want clearly-defined Internet access packages at a fixed price so that they can control their costs and avoid so-called “bill shock”.

These results show that users continue to expect their broadband connection to buy them free choice and access to the whole Internet – i.e. without limitations on the sites they can visit and applications they can use. Where there are limitations to their Internet access – for example, limited speeds at certain times of day to manage legitimate issues like network congestion – users expect to be told about them so that they can compare broadband access services and make informed decisions about which service to buy.

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?

We agree with the gist of paragraphs 5.23-5.29 that consumer information can be significantly improved. The proposal to ensure that some ‘key facts’ understandable by the “man in the street” are made available next to more detailed, including technical, information, seems appropriate. Examples such as the UK Financial Services Authority’s practice could be highlighted here: when buying a financial product, consumers are presented with both a simple, usually one-page-long ‘Key Facts Illustration’ with easy to understand main details of the offering, followed by an in-depth brochure detailing the terms and conditions. This would enable consumer alpha to understand what access they are buying (how much bandwidth they can consume, how much speed they can expect etc. as well as any other substantial restrictions) so that they can compare it easily with other offers, and also find out more about the detail on specific points by going to the longer section if necessary.

So that information is truly comparable, and well publicized, Ofcom should consider broadening its annual research on broadband speeds done in conjunction with SamKnows²³ and/or others, to include broadband traffic management practices by both fixed and mobile Internet access providers. The analysis carried out in relation to broadband speeds is done in such a way that such topics as traffic blocking or degradation (for instance, of specific applications or protocols) should be captured and reported upon easily. This approach provides a number of benefits:

- costs would be kept to a minimum because the study is already being carried out;
- because it is generated independently by Ofcom, the information would be provided in an unbiased manner and consistent for all fixed and mobile ISPs; and
- awareness of the findings by consumers could be significant, since the results of the broadband speeds study are usually well disseminated in the UK media.

Nevertheless, Skype maintains that improved information will be insufficient in ensuring that consumers have real alternatives and are able to ‘punish’ restrictive operators through switching (for reasons we have already given above). Users should be additionally protected by a non-discrimination principle whereby a service marketed as ‘Internet access’ allows access to all (lawful) Internet content, applications and services as well as the dissemination thereof. Limitations

[October2009.pdf](#); ‘European Consumer Expectations of Internet services’,

<http://www.synovate.com/ispconsumerresearch/>.

²³ <http://consumers.ofcom.org.uk/2009/07/ofcom-reveals-uk%E2%80%99s-real-broadband-speeds/>

to 'Internet access' should only concern broadband speeds or volume caps, as indicated by the European Commission²⁴.

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

We suggest that Ofcom expands its annual *Broadband Speeds* study, and the associated consumer awareness raising campaigns, to encompass limitations of service, as indicated in our answer to ix) above.

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

In line with the Citizens' Rights Directive, and considering in particular the existing widespread restrictions in place on mobile access to the Internet in the UK, ex ante minimum quality of service should be imposed.

The goal of the revised European legislation, which empowers NRAs to impose a minimum quality of service, is clearly to prevent blocking or degradation of service, as unambiguously worded in Article 22.3 of the Citizens' Rights Directive (see our response to question (vi)).

So as to conform to this very clear direction for ex ante imposition of minimum quality of service, Skype believes that an end-user should always be able to access the best efforts, global public Internet, whichever other services they may also be subscribing to. This would enable operators to innovate with their offerings, whilst ensuring that end-users are always able to access existing and new Internet content, applications and services as well as the dissemination thereof. The only exception should be to ensure reasonable traffic management, as described in our answers above.

It is important that quality of service levels are regularly analysed to ensure that best efforts Internet access is not left behind by other ISP service offerings through lack of investment in infrastructure. There is a risk that a pre-defined quality of service which is not regularly re-visited results in a 'dirt road', diminishing the social and economic value of the Internet, particularly to the most disadvantaged in society.

Should you require any additional information with regard to the contents of this response, please do not hesitate to contact us.

Yours faithfully,

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²⁴ See European Commission statement on the telecom package, <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/219&format=HTML&aged=0&language=EN&guiLanguage=en>