

BBC response to Ofcom's discussion document on traffic management and 'net neutrality'

EXECUTIVE SUMMARY

The policy goals

The internet is central to people's lives – it has become a utility akin to electricity or water. As the European Commission states: "...it empowers citizens and brings a better quality of life through, for example, better health care, safer transport and easier access to public services. It is an engine for creating more growth and jobs. It is a platform for the delivery of public and private services."

The open and 'neutral' character of the internet is considered by many to have been a key driver of its growth and success to date. However, technological developments and the growth in the volumes of traffic passing over the internet pose challenges to this character. Undue blocking and degradation of traffic is already taking place.

In this environment, to ensure the effective operation of the internet, consistent as far as possible with the principle of openness and neutrality, we need to have in place a clear, robust framework.

In line with the EU regulatory framework, the overriding policy objectives should be:

- to take all reasonable steps to guarantee end users' ability to access the content, services and applications of their choice via network operators in a transparent and non-discriminatory fashion;ⁱ
- to ensure that electronic communications networks run smoothly, to guarantee a satisfactory quality of service; and
- to enable the long-term development of electronic communications networks and services due to innovation, competition and the development of efficient technical and business models.



This approach strikes a balance between the needs of all stakeholders and will enable continued innovation in internet applications and content which drives user demand for internet access and bandwidth. In turn, this should help underpin future investment in next generation networks.

The 'rules of the game'

In the BBC's view, a series of conditions and principles – or 'rules of the game' – must be in place across the entire value chain to ensure delivery of these objectives in a satisfactory manner. These principles are intended to be applicable to any access technology, and to both fixed and mobile networks – although their implementation may need to take the specific features of each type of network into account. They are as follows:

- **Ensuring effective competition in the broadband retail markets.** While the state of fixed broadband competition appears to be healthier in the UK (and many other EU countries) than in the US, the market is still fairly concentrated with six players controlling 95% of the residential broadband market. The ability of many consumers to switch between providers is constrained by product bundling, contractual restrictions, and complicated information. It is important to recognise the potential for market developments (e.g. vertical integration) to incentivise discriminatory behaviour, including the abuse of bottleneck control over users' internet access.
- **Transparency is a means of ensuring that competition brings benefits to end users.** The current information available to consumers is not satisfactory. Strengthening transparency requirements with respect to the services ISPs provide to end users should be a priority to allow informed choices. In line with the 2009 EU regulatory framework (see below), ISPs should be required to provide end users with clear, accurate and relevant information about the quality of service of their offerings and their traffic management practices.

Given the limits to effective competition and consumer transparency in the UK broadband market, the BBC thinks that current conditions are not conducive to allowing unconstrained traffic management without regulatory oversight. There are a number of anti-competitive practices that could emerge, which would not be constrained by consumer switching at present. There is also a serious risk of



inefficiency in the wider market if unconstrained traffic management becomes the norm.

The BBC believes that traffic management should only be used at a minimum for technical and legal reasons. In our view, discriminating traffic by content provider or origin will distort competition and deviate from the end-to-end principle which is at the core of the open and neutral character of the internet. It is critical that Ofcom takes a clear view of what reasonable traffic management comprises and the circumstances in which it is appropriate. In doing so, we think ARCEP's proposed principles could be usefully adopted as a framework or code of practice for overseeing traffic management in the UK – namely, when traffic management does occur, it should be proportionate, transparent, effective and non-discriminatory. In any event, the BBC thinks traffic management should primarily be a temporary solution to assist stepped investments in network architecture, developments which the regulatory framework should reflect.

In order to deliver the policy objectives above, it is critical that Ofcom considers minimum-quality levels for 'best efforts internet access' to prevent service quality on the open internet declining to acceptable levels. In particular, the following elements must be place:

- Protection of 'best efforts open internet access' where neutrality is the presumption. Internet access services marketed to UK end users must meet the following tests: (a) provide access to all of the internet's functional capabilities in a non-discriminatory fashion; (b) deploy exceptional traffic management; and (c) aim to deliver a transparent and minimum quality of service, based on verifiable criteria. Ofcom should set (and monitor delivery against) the minimum quality of service expectations for best efforts open internet access, in consultation with ISPs, content providers and consumer groups. Any definition must be dynamic and should reflect the evolving expectations of end users to be able to run services and applications of their choice for a given bandwidth speed.
- Operators that do introduce 'managed services' should ensure these practices are transparent and as clear as possible to end users. Ofcom should require all operators to make such services available on FRND terms and ensure they do not degrade the minimum quality expectations for other content being delivered via the open 'best efforts' internet. Furthermore, Ofcom should also ensure that traffic management is not abused by ISPs to discriminate against those perceived as direct or indirect competitors.

Ofcom should maintain a proactive watching brief on market developments to be alert to problems and, if necessary, intervene swiftly and efficiently to address harmful behaviour.

The policy levers

It is important that the UK Government empowers Ofcom with the regulatory tools necessary to guarantee the above conditions in a dynamic fashion, and so achieve the overarching objective of guaranteeing access to content. The transposition of the revised European regulatory framework into UK law by May 2011 provides the opportunity to do so. The key provisions that should be fully utilised include:

- the requirement for transparent communication with end users about restrictions on use practiced by network operators, and about traffic management practices implemented by operators (Articles 20 & 21 of the Universal Service Directive)
- the power to set minimum quality of service requirements, overseen by the EU Commission, in cases where traffic management practices may put the neutrality principle at risk (Article 22 of the USD)
- the powers to introduce obligations in cases where the practices of network operators constitute discriminatory and/or anti-competitive behaviour (Article 5 of the Access Directive)

In line with best regulatory practice, these provisions could be implemented via a co-regulatory route in the first instance. One option may be for Ofcom to establish – in consultation with industry – a code of practice defining reasonable traffic management practices and the operation of managed services alongside ‘best efforts open internet access’. Ofcom should retain an oversight function, monitoring and reporting on the practices and behaviour of network operators to identify the potential for consumer and citizen harm. An industry forum may also provide useful means of resolving problems and discussing common issues in the first instance. Where there is discriminatory and/or anti-competitive behaviour, Ofcom should intervene swiftly and firmly, potentially introducing ex ante obligations on network operators that have engaged in harmful practices.

Without a clear and effective framework in place, there is, in the BBC’s view, a significant risk of discriminatory and anti-competitive practices developing which would undermine the character of the internet to date which has delivered



significant public and wider economic value. Given the fast-moving online market, reliance on ex post competition policy alone is unlikely to be sufficient to safeguard the strengths of the internet and protect the interests of citizens and consumers.

Introduction

The BBC welcomes Ofcom's discussion document on traffic management and 'net neutrality'. The document raises a number of critically important issues which undoubtedly require further careful consideration and thorough debate before the European Union regulatory framework is transposed into UK law. We look forward to engaging with the subsequent formal consultations by Government and Ofcom over the coming months. In the meantime we hope the following points make a useful contribution to Ofcom's developing thinking around the issues.

The importance of the internet and this debate

As Ofcom recognises in its discussion document, the internet is increasingly central to the lives of citizens, consumers and industry. It has transformed how we work, communicate, access media, and contribute to society, offering unprecedented scope for freedom of expression, plurality of information, and economic growth. The internet's potential is endless – as the Secretary of State for Culture Media and Sport has recognisedⁱⁱ, which Ofcom itself noted in the last PSB Review:

*"the internet offers low initial barriers to entry, reduced upfront risk, and investment can be amortised over a long period... Internet distribution costs are low, and falling rapidly... the web empowers individuals to collaborate in the creation of their own content... the interactive and participative nature of the internet makes it an effective repository for information and a platform for research and discovery...some types of content can be more effectively delivered via interactive media than on TV... the internet is also able to serve niche interests and specific communities, and is an important platform for delivering local media services across the UK."*ⁱⁱⁱ.

These benefits have emerged as a result of the open nature of the internet, whereby users are able to access and distribute information of their choice. The European Institutions have recognised the need to safeguard the internet's open and neutral character in legislation, requiring national governments and regulatory authorities to promote this policy objective when implementing the revised European Framework for Electronic Communications Regulation.



We think it is vital that Ofcom considers issues relating to traffic management and 'net neutrality' as a converged regulator and competition authority, having full regard to the range of Ofcom's statutory duties. In particular Ofcom's primary duty to further the interests of citizens and consumers should be at the heart of this discussion, alongside its other responsibilities to ensure plurality, encourage innovation, ensure availability of high quality communications services, and maintain and strengthen public service broadcasting. Failure to actively safeguard the consumer and citizen interest risks delivering a policy outcome that is biased towards the interests of operators, which will inevitably distort the innovative dynamics inherent in the internet value chain.

The internet's unparalleled value as a tool for political and creative expression deserves the strongest protection against unwarranted barriers. Without a clear and effective framework in place, there is a risk of discriminatory and anti-competitive practices developing to the detriment of the citizen-consumer and UK plc.



The BBC's internet experience

Over the last decade, the internet has become an essential platform for delivering the BBC's public purposes and services. As a public service broadcaster, achieving widespread broadband penetration and usage is increasingly important to the delivery of the BBC's public service mission:

- As an institution charged with 'delivering to the public the benefit of emerging communications technologies and services', the BBC is keen to help all citizens benefit from the internet whether for entertainment, information, education or democratic participation;
- As a major public service content provider, we have a duty to ensure universal access to our services in the most convenient way consistent with a reasonable cost, and should meet our audience's demand to engage with content creatively
- As a producer of innovative public service output, we are always seeking opportunities to develop new content formats (e.g. BBC iPlayer) that deliver public value, and believe that extending the physical limits of networks will allow creativity and innovation to flourish.

The BBC launched its online services in 1997. Initially this was primarily a text and image website, but as technology developed, and user expectations became increasingly sophisticated, the BBC's online services extended to audio and then video content, culminating in the launch of BBC iPlayer in 2007.

Since its launch, iPlayer has evolved to add live TV channels, HD and a range of other functionality such as recommendations. It has been repurposed to work on a wide range of different devices and platforms, reaching mobile phones, games consoles and internet-connected TVs. Delivering a record 130 million streams of TV and radio programmes in May 2010, iPlayer has established itself as a leading digital brand and a pioneer in the provision of on-demand services. It has a consistently high user approval rating (consistently over 8 out of 10)^{iv} and 9 out of 10 users say they would recommend it to their friends^v. iPlayer currently reaches 17% of all active internet users every month^{vi}, and this is projected to grow significantly over the next few years. As Ofcom notes, BBC iPlayer has driven general consumer awareness of video on demand content available from other broadcasters, to a world now where almost a third of all households use the internet to watch online video catch-up^{vii}.



More broadly, BBC internet services have played a considerable role in bringing people to the internet. BBC Online is the most visited British-owned content site in the UK and the most trusted website by some margin. 9% of internet users agree that 'the existence of the BBC's website was one of the main reasons why I first accessed the Internet'^{viii}. Ofcom's market impact assessment of the BBC's on-demand proposals recognised the positive market impact of iPlayer in driving take-up of broadband by households^{ix}. In addition to the wealth of content on BBC Online, the BBC has also delivered specific initiatives to promote particular aspects of media literacy^x, helping inspire people to connect to broadband, supporting the Government's national broadband commitments and Race Online campaign. Simultaneously the BBC maintains a continuous level of cross-promotional support for broadband services such as for BBC iPlayer in programme trails.

Undoubtedly the BBC has been a key driver of consumer demand for broadband. In exchange, ISPs have been able to make access to video content an integral part of their business models, recouping their delivery costs from the consumer. The BBC believes this remains the most effective means of cost recovery for network operators, as it allows consumers to weigh up the quality and cost tradeoffs of their broadband package. This ensures that all content providers can benefit equally from improved infrastructure. New products and services provide the opportunity for premium broadband products, while other innovative video-based applications also benefit from this infrastructure.

In the long term, the BBC considers that adequate provisioning of bandwidth is the best way to deliver quality of service and the rollout of next generation products should make this easier. In the meantime, the BBC has already taken a number of steps to reduce bandwidth requirements by using improved compression technologies which can support high picture quality at lower bandwidth. We also deploy adaptive bit-rate technology, which encodes content streams to a number of different bit-rates, and continuously monitors the available bandwidth end to end to a consumer's PC. If the available bandwidth drops below the set threshold, the stream switches to content coded at a lower bit-rate. This means that viewers on a good network connection get a high quality experience, whilst viewers on a poor connection get, as far as possible, an uninterrupted viewing experience at the best video quality that their network can provide. The BBC continues to explore opportunities for reducing demand on the network, and ongoing collaboration with industry and technology partners is an important means of achieving this. We also support moves towards supporting IP multicast given its significant efficiencies as a result of reducing the amount of encoding infrastructure and network traffic. The advent of IPTV over closed networks has driven adoption of IP multicast within



those networks to provide efficient support for the delivery of linear TV channels. As IP-connected TVs become more widespread, the BBC believes that opening multicast to the public internet will enable the same innovation and evolution for linear TV services to take place as has been the case for all other internet services to date, and provide competition between internet and network-provider services.

The BBC's diagnostics capability allows us to closely monitor how ISPs manage BBC content on their networks and to individual. Specifically we are able to collect information about: time spent buffering (where the video is frozen while sufficient data is loaded to enable playback to continue); stream bit-rate where adaptive bit-rate is in use; and connection rates where the iPlayer diagnostics have been used (www.bbc.co.uk/iplayer/diagnostics). This information allows us to see where traffic management technology may be in use by ISPs. The BBC has concerns about the increasing potential incentives for discriminatory behaviour by network operators, which risks undermining the internet's character, and ultimately resulting in consumer harm and citizen detriment. Traffic management also has the potential to become a substitute for investment to increase network capacity to accommodate increased demand.

The BBC’s position on traffic management and ‘net neutrality’

In the BBC’s view, internet access should be unhindered so that any internet user is guaranteed to be able to access all legal content, services and applications on the internet in a transparent and non-discriminatory fashion.

We recognise that reasonable traffic management may be required in some circumstances in order to manage the network. In our view, reasonable traffic management practices include measures that address legitimate network congestion and traffic management issues for technical and legal reasons. But this should be the exception and should be based on traffic type. In our view, discriminating traffic by content provider or origin will distort competition and deviate from the end-to-end principle which is at the core of the open and neutral character of the internet.

Our view can be summarised as below:

Kind of traffic management	Example	BBC position
By origin	Google talk vs. Skype	Unacceptable - compromises the principal that the internet should be open allowing all actors to connect to each other freely
By application type	Email vs. VOIP	May be acceptable in exceptional circumstances for technical reasons to manage the network. This should be temporary solution while network infrastructure improves.

The BBC believes an open internet is important to allow all actors to connect equally to each other creating an environment that maximises the opportunity for democratic interaction and delivers enhanced access to lawful information and freedom of speech. Limiting the potential audience for online content or services denies some users the ability to access and enjoy content or services, and will reduce the incentives for entrepreneurs to invest in online businesses. The ability

for new internet start-ups to emerge and grow global is dependent on open internet access.

The BBC thinks it is critically important that Ofcom takes a clear and reasonably detailed view of what reasonable traffic management comprises and the circumstances in which it is appropriate. To that end, we point to the interpretation adopted by the French regulator ARCEP in its recent statement on traffic management. Specifically, we think ARCEP's proposed principles could be usefully adopted as a framework or code of practice for overseeing any minimal traffic management in the UK – namely, when traffic management does occur, it should be proportionate, transparent, effective and non-discriminatory. These principles can be interpreted as follows:

- *Proportionality*: the measure must seek to have the least possible impact on the network's operation. Available capacity allocated to a certain type of traffic must not, for instance, be divided by four if it will suffice to divide it by two to avoid congestion. One important criterion in this area appears to be the duration and frequency of the measures applied: beyond a certain threshold, the congestion can no longer be viewed as temporary but rather a capacity issue whose cause is structural, and for which corrective measures need to be put into place, particularly through additional investments.
- *Effectiveness*: this means that the measure must produce the hoped-for effects, by limiting collateral damage as much as possible (e.g. in terms of data security) and any harmful technical and economic incentives. This principle can therefore be verified if the adjustments to traffic lead to a real improvement in access to certain services, without significantly degrading the rest of the services that can be accessed via the Internet, and without lessening content providers' incentives to code their content efficiently.
- *Transparency*: for an ISP this means informing end users properly, as much as possible, on the traffic management mechanisms in place. Naturally, the right level of detail and the most opportune time and means of communication need to be sought so that this information be as useful as possible. In the case of "fair use" policies, in particular, subscribers must be kept informed of their consumption, while avoiding overly intrusive mechanisms that would discourage use of the services (see later). Stakeholders other than ISPs should be encouraged and enabled to contribute to consumer transparency.
- *Non discrimination*: this principle means that streams with comparable technical properties must be treated in an equivalent fashion. The particular goal is critical to prevent an ISP from favouring its partners' content/services/ applications (or its own if it is vertically integrated) over those supplied by others.

It is also important to identify the motives behind the planned measure and its correlation to the problem that has been identified. Acceptable motives include: avoiding congestion (when a danger has been proven) or ensuring network integrity (e.g. protecting it from attacks). Using balanced measures also means that the response is properly targeted.

In addition to clarifying the circumstances in which traffic management is acceptable, Ofcom should consider introducing minimum-quality levels for network transmission in order to prevent service quality declining to unacceptably low levels. Minimum quality or 'internet access' must be easily identifiable by users, and include the following features:

- openness to all of the internet's functional capabilities;
- supervision of the authorised (and minimal) traffic management practices;
- a sufficient quality of service, based on verifiable criteria (qualification of relevant metrics and indicators).

A minimum QOS expectation must be set at a sufficient level to allow acceptable levels of quality, and allow all providers to compete on an equal footing, while giving new entrants scope to innovate.

We recognise that implementation of a minimum quality of service would be complex and practically challenging. It would need to take into account detailed combinations of attributes including priority, bandwidth consumption, link delay, latency, error characteristics, and other features. Minimum quality of service could be made meaningful to consumers by describing it in terms of functionality and available services (e.g. long-form audio-visual content). Critically any definition would need to be an evolving and dynamic concept, regularly reviewed and improved in order to deliver changing consumer expectations. Interpretation of QOS should be an industry-wide collaborative effort, overseen by the regulator, and with the consumer experience at its heart.

Despite these practical challenges, the French regulator ARCEP has begun to consider ways to ways to interpret and define QOS, which are non-mutually exclusive, including:

- a standards-based approach, using existing quality of service specifications for audio, video and data applications
- sector-specific co-regulation approaches between NRAs and market players to identify and disseminate common references, notably with respect to the



definition of quality of service parameters for Internet access, and best practices

- statistical measurement and monitoring methods, based on the selection and supervision of indicators and, possibly, setting relevant requirement levels at a later time based on analysis of these indicators, which can be paired with giving users the ability to measure, report and compare their own qualitative experience

Evidently a significant amount of further work is required to establish QOS for the open internet, but effort should be made to pursue all possibilities. We look forward to engaging with Ofcom about considering minimum QOS going forward. The BBC has views about tools for helping to understand and measure users' qualitative experiences in dynamic and evolving ways using common references that consumers will understand.

We note that a variety of new commercial models are developing, some which involve ISPs supplying 'managed services'. It is important that 'managed services' are transparent and as clear as possible to end users. Such services should also comply with competition principles (i.e. be available on FRND terms) and, critically, must not degrade the minimum quality expectations of the 'best efforts' internet which guarantees low barriers to entry and innovation.

These developments should be monitored by Ofcom, including:

- Monitor arrangements by all operators, particularly vertically integrated operators, to ensure exclusivity arrangements do not occur which distort competition, and must prevent network operators leveraging their positions to favour their own content or networks.
- Monitor arrangements to ensure that 'managed services' do not degrade the performance of other content being delivered via the open internet. If necessary, Ofcom should use its powers to introduce a minimum quality of service to ensure network operators and ISPs designate a certain proportion of network capacity to 'best efforts' internet access.
- Clarify its investigatory powers, to ensure the threat of regulatory intervention is genuine and credible. This should involve putting in place a swift complaint & resolution process.

Market dynamics

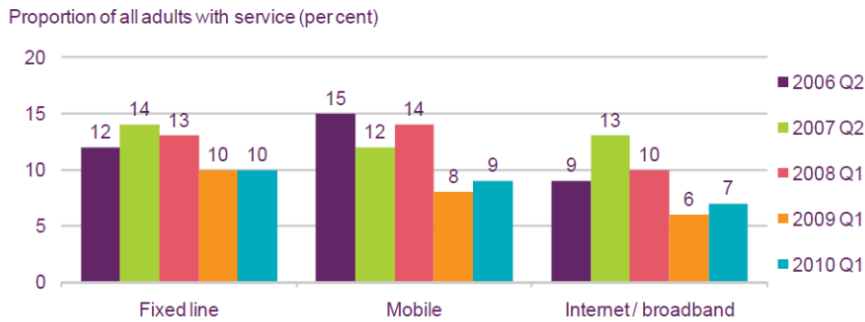
Ofcom's discussion document concludes there is no case for prohibiting all forms of traffic management because existing competition tools and consumer transparency options are sufficient safeguards against harm. The BBC thinks this conclusion has been reached prematurely.

The UK broadband market has a number of retail providers, but it remains concentrated with six ISPs comprising over 93% of consumer market share^{xi}. Some households, for example those in rural areas, have restricted choice of provider or technology type. The BBC notes that consolidation in the sector is resulting in vertically integrated operators having increasing market share of broadband. This could create the motive, opportunity and means for discriminatory behaviour that stifles content and application innovation.

Ofcom recognises that, for a market to remain competitive, there needs to be a certain amount of consumer activity in terms of switching and/or monitoring markets, and being prepared to switch^{xii}. Ofcom's own research shows that consumer switching of broadband supplier is very low and declining year on year. In cases where there are significant switching costs or barriers, transparency as to the nature of traffic management practices might not be sufficient.

Ofcom's 2009 research showed that a quarter of households found it difficult to switch broadband and bundled services, despite an increase in the perceived ease of comparing the cost of bundles. The perceived hassle of the switching process and, increasingly, the threat of additional charges were some of the reasons put forward for not switching, but there are a number of other cited barriers to switching - including loss of email address, no perceived financial gain, an inability to understand complex technical information, lack of service availability, and restrictive terms and conditions (i.e. being tied into a contract).

Figure 5.97 Proportion of consumers who switched provider in the previous 12 months

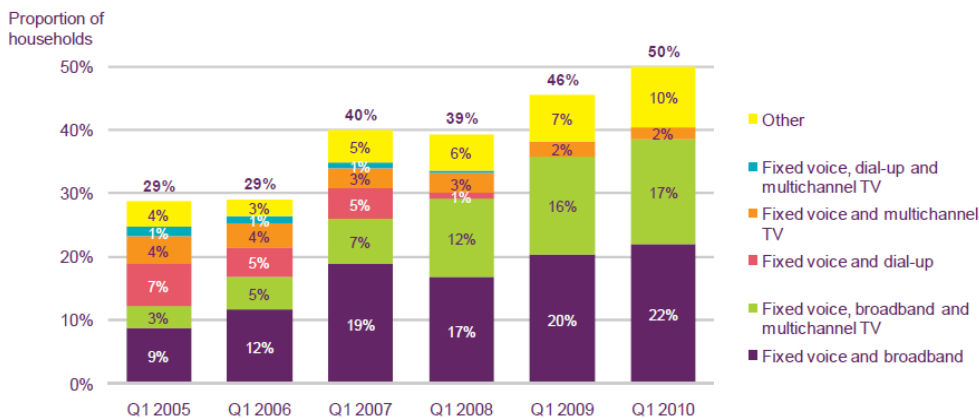


Source: Ofcom research

Note: Data for 2008 onwards are the proportion of broadband consumers who had changed broadband provider in the last 12 months and is not directly comparable with previous data which is the proportion of internet users who had switched; 2009 data are based on fixed broadband consumers; switching when moving home is excluded from these data.

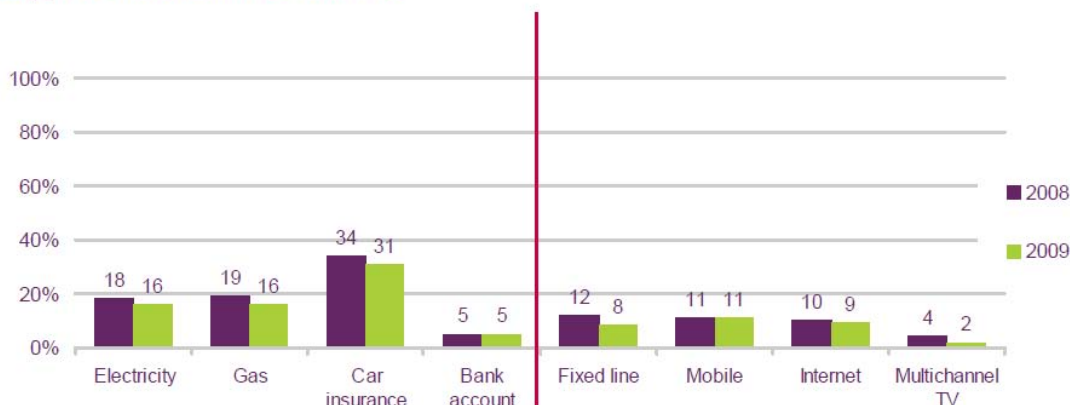
Consumers with bundles are less likely to switch provider than those with single services. Just 3% of those with a bundle switched their whole package in the year to Q1 2010, compared to 11% of those with stand-alone fixed broadband, 6% with stand-alone fixed voice and 3% with stand-alone pay-TV. The take-up of bundled services is increasing, as Ofcom’s research shows below, which suggests that switching of supplier is likely to decrease if current trends continue. Consolidation among operators in the market – especially vertical integration among content providers and network operators – further exacerbates this trend.

Figure 1.40 Take-up of bundled services over time



The low levels of switching of broadband supplier are, in the BBC’s view, indicative of a market that it is insufficiently competitive. Compared to other utilities, switching of broadband is also low, as below. If this is the case, then discrimination against rival content, applications and services providers by ISPs could lead to consumer detriment – even if no single ISP actually dominates the market.

Figure 144: Proportion of customers who have switched communications and utilities suppliers in the last 12 months



Source: Ofcom decision making survey

Base: All adults with fixed line (2008, 941) (2009, 781) mobile (2008, 1270) (2009, 1231) internet (2008, 460) (2009, 388) multichannel TV (2008, 896) (2009, 837), electricity (2008, 1309) (2009, 1226), gas (2008, 1125) (2009, 1069), car insurance (2008, 1107) (2009, 1019), bank account (2008, 1418) (2009, 1350)

It is critical that Ofcom’s proposed behavioural economics research examines the importance of transparent and meaningful information alongside other barriers to switching. The BBC looks forward to contributing to that programme of work where possible.

Incentives for anticompetitive behaviour

The BBC believes there are clear incentives for anti-competitive behaviour to arise if unconstrained traffic management is permitted. At a basic level, allowing network operators to discriminate against certain types of content creates an additional entry cost for content and service providers. In the long-term this could prevent innovation and in turn restrict consumer choice. Furthermore, there is a real risk that ‘managed services’ could create an incentive for ISPs to ensure access remains scarce, thereby disincentivising further investment in next generation services.

Vertically integrated operators are incentivised to restrict some types of traffic that compete with similar services to content providers. Vertically integrated operators may also discriminate to create sufficient capacity for its own services, even if they do not directly compete.

Additionally there are incentives for non-vertically integrated network operators to behave anti-competitively and distort competition:

- An ISP could develop preferential relationships with certain content providers to the exclusion of others, even if the latter is willing to enter a commercial

relationship as it may be profitable for the ISP to only engage with one provider (and can then extract a higher premium from that content provider).

- An ISP could agree exclusive contracts with certain content or application providers, which might lead to only content providers with sufficient resources to be able to negotiate a deal, thereby distorting competition, hindering innovation, and resulting in reduced consumer choice.
- Additionally consumer harm may arise if an ISP that initially operates fairly changes its available services over time to restrict access to certain content providers, as described above. Customers may be locked-in to a contract and unable to switch provider without penalty, even if they wanted to.

Ofcom and Government must carefully consider the longer-term implications of allowing unconstrained traffic management, and should recognise there is a serious risk of dynamic inefficiency in the wider market. Economides (2010) articulates this as follows:

“Society loses in three ways: from innovation that will not occur because only firms with deep pockets can survive; from reduced variety of services due to foreclosed firms that have disappeared; and from lost consumer surplus because some content providers will disappear”.^{xiii}

The BBC also serious concerns about the effectiveness of competition tools to address anticompetitive behaviour in a fast-moving, complex market. Ofcom states that an ISP which undertakes traffic management must firstly have some degree of substantial market power in order for regulatory concerns to be triggered. However there is no elaboration of what is meant by substantial market power because the current discussion is at a ‘broad conceptual level’. Ofcom states that “without market power there is a strong presumption that no anti-competitive effects and consumer harm will arise... because consumers will tend to punish attempts at exclusionary behaviour by simply shifting their business to an alternative provider who does not engage in the same exclusionary practices”. Additionally Ofcom states that “for a discriminatory strategy to be plausible, an ISP would have to be either vertically integrated into some content, applications or services markets or planning to do so in the future”. Finally Ofcom states, “even if the above conditions are met, ISPs may not always have an incentive to exclude competitors”.

The BBC thinks that this position needs considering further, not least because the concept of SMP is not explored, including the degree to which competition exists in the market for internet provision, or what barriers to entry exist for new entrants into this market. Ofcom should also explore the full range of possible exclusionary



behaviour by operators, for example exerting bargaining power when negotiating with content providers. It is imperative that Ofcom thoroughly explores the full range of potential risks to competition that may arise from unconstrained traffic management before reaching any conclusions about the appropriate competition law framework.

Experience in other regulated sectors, such as electricity and rail, has shown that ex post intervention often ameliorates consumer harm, not least because the requisite processes are so lengthy and information gathering is challenging and sometimes impossible. Given the dynamic and complex nature of the internet, relying on ex post competition law (and its inherently lengthy and complex application) would be ineffective in preventing anti-competitive conduct by ISPs, and may lead to inconsistencies in regulatory outcomes.

Consumer transparency

Ofcom recognises that in order for competition between ISPs to be sufficient to remove or reduce incentives for any ISP to behave anti-competitively, consumers must be able to make well informed decisions and need to be able to change provider without incurring unnecessary switching costs. As outlined earlier, we are not convinced that this is currently the case and achieving it will require significant progress by the industry.

The BBC strongly supports the focus on consumer transparency. As the European Commission Neelie Kroes stated in April 2010, transparency is ‘non-negotiable’, and it should be clear to consumers what traffic management practices are in place and what it means for them. However, in order for information to be meaningful, it needs to be comparable and up-to-date so it can be factored into purchasing and switching decisions.

In line with the strengthened transparency provisions in the European framework, network operators should be required to regularly provide end users with clear, precise and relevant information on traffic management, including but not limited to:

- Price of the package and what it includes (i.e. connection speed rate and services available at different times of the day)
- A thorough description of traffic management practices
- A thorough explanation of how and why traffic management is used (if it is)



- Illustrations about how traffic management can affect a user's internet experience for different types of internet services;
- Details about changes made to existing traffic management practices;
- Information on usage caps and costs of exceeding that usage cap;
- Information about options for upgrading; and
- Links to Ofcom accredited consumer information and price comparison websites.

Additionally, Ofcom should also require network providers to supply real time information to users. By giving existing users accessible information about the status of their network connection, they are able to track their usage and ensure they are still within any usage limit set by their network provider. Information should also clarify whether their connections speeds are slower due to congestion or due to traffic shaping. If combined with information available from content providers (such as the BBC) this information could be compared across the market, so as to allow users to see the performance of their network operator relative to others. The BBC would welcome an opportunity to work with industry and network operators to develop accessible information tools to allow consumers to better understand the nature of their broadband service. The BBC has data which could be shared with industry and Ofcom in order to improve consumer understanding of their individual connections, and to offer comparable aggregated data with other networks. If presented in a user-friendly way, we think this information could usefully help consumers to make informed decisions about their broadband connections and empower them to switch where appropriate. It is essential that consumers – particularly of mobile networks – are empowered to differentiate between different broadband packages and any restrictions placed on accessing types of content.

Conclusion

Ofcom's discussion document raises a number of critical issues and questions that potentially impact on the internet experience of UK consumers and citizens. It is important that Ofcom examines all the available evidence and properly considers all risks associated with allowing unconstrained traffic management. Government and Ofcom should develop an approach which reflects the fundamental principles of openness and neutrality, where consumers are able to access and distribute information of their choice, and innovation can prosper.



Given the limits to effective competition and consumer transparency in the UK broadband market, there is case that market conditions are not conducive to allowing unconstrained traffic management without regulatory oversight. There are a number of anti-competitive practices that could emerge, which are unlikely to be constrained by consumer switching at present. There is also a risk of dynamic inefficiency in the wider market if unconstrained traffic management becomes the norm.

The BBC believes that traffic management should only be used at a minimum for technical and legal reasons. In our view, discriminating traffic by content provider or origin will distort competition and deviate from the end-to-end principle which is at the core of the internet. It is important that Ofcom takes a clear view of what reasonable traffic management comprises and the circumstances in which it is appropriate. Furthermore, the UK Government should empower Ofcom with the tools necessary to improve consumer transparency and switching, and introduce minimum service quality requirements where traffic management practices put the neutrality principle at risk. A co-regulatory approach may be well-placed to deliver the necessary safeguards in the first instance, but Ofcom must provide a constant monitoring role and be prepared to intervene swiftly and robustly if anti-competitive behaviour becomes apparent.



ⁱ Subject to legal provisions in effect

ⁱⁱ Speech by Jeremy Hunt, January 2009. "Whether remote medical care, online tutorials, video calling or community television, the possibilities are endless. They are limited only by the imagination of the entrepreneurs who use it."

ⁱⁱⁱ Ofcom Public Service Broadcasting Review, Phase 1: The Digital Opportunity

^{iv} BBC Pulse Online Survey

^v BBC Pulse Online Survey

^{vi} Ofcom CMR 2010

^{vii} Ofcom CMR 2010

^{viii} BBC Research

^{ix} Ofcom market impact assessment of BBC on-demand proposals, 2007

^x The BBC aims to provide some support to everyone on their media literacy journey, working with internal and external partners to maximise impact and add value to the BBC's existing content and services. The BBC aims to help people get online and then build their confidence once online, including reducing the c10.5 million adults currently not online. Key elements are marketing and communications campaigns, direct contact through outreach initiatives, and accessibility and safety tools online for children and parents.

^{xi} BT (27.5%), Virgin (22.2%), TalkTalk (22.3%), BSkyB (13.8%), Orange (4.1%) and O2 (3.4%) together now make up over 93% of the broadband market. Enders Analysis

^{xii} Ofcom Consumer Experience Report 2009

^{xiii} Economides, Nicholas (2010), Broadband Openness Rules Are Fully Justified by Economic Research, Stern School of Business, New York University