

Question 1: I answer as:

e) Association of Internet network or service providers provider AND g) Association of Internet content and applications providers

Question 2: (all respondents) a) Please provide a brief description of your organisation and of your interest in open Internet issues.

The Computer and Communication Industry Association (CCIA) has members active in all levels of the technology value chain from online service provision to network operators, software and data centre providers. These businesses all have an interest in policy towards the maintenance of an open Internet.

b) If your organisation is registered in the Transparency Register, please indicate your Register ID number.

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c) Please provide the postal and e-mail address of your organisation and, if you wish, the name of a contact person (including telephone number and e-mail address) for any questions on your contribution.

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d) In which Member State(s) are you established and where do you perform your activity?

CCIA has an office in Belgium, but its members are active in every member state of the EU. Within the EEA the CCIA also has an office in Geneva.

1. Traffic management

Traffic management is the term used to describe a wide range of technical practices undertaken to manage traffic across networks, which includes prioritization, slowing down, throttling or blocking of certain data packets. There seems to be consensus that traffic management is a legitimate tool to effectively protect the security and integrity of networks, to restrict the transmission to end-users of unsolicited communication (e.g. spam) or to give effect to a legislative provision or court order.

It is also widely understood that certain traffic management techniques are involved in the provision of "managed/specialised services"¹ (that provide a generally guaranteed quality of service and a strict admission control). This questionnaire focuses on cases where traffic management is applied by ISPs for

such purposes, or for other contractual or operational purposes such as congestion management, the enforcement of contractual restrictions etc. Furthermore, BEREC's traffic management investigation showed that a number of traffic management techniques are actually applied by ISPs. For instance, ISPs commonly apply certain traffic management practices in order to avoid or manage traffic congestion in a network. Traffic management is also sometimes deployed to provide a guaranteed quality of service for "managed services", for example IP-TV, video on demand (VoD), etc. Another issue is that traffic management often involves monitoring practices that may raise privacy concerns. The following questions ask for additional information regarding these traffic management techniques.

1.1 Traffic management and differentiation

Question 3: Please explain briefly which traffic management techniques are usually applied by network operators or ISPs and how they are technically implemented.

CCIA is aware that a range of techniques is applied by ISPs to manage traffic. These range from blocking certain services or service-types at certain times of day to 'throttling'.

However, it is imperative to bear in mind that discrimination through other methods is equally potent. These include:

- **with terminal equipment subsidisation and bundling ISPs are often able to ensure certain applications are not pre-installed or embedded in the operating system of the bundled device**
- **contractual restrictions on the services that users can access, including exclusion of services unless specific service bundles are purchased**
- **discrimination through pricing to drive customers towards an ISPs own, or a partner's, content and services.**

Question 4:

Congestion management is one of the reasons for applying traffic management measures.

- a) Please describe briefly how congestion management normally works.
- b) If possible, please provide a definition and examples of genuine congestion management measures, i.e. measures which are necessary to avoid or tackle network congestion, as opposed to measures which may be called congestion management but actually pursue other purposes.

Traffic Management measures designed to deal with security threats, spam and exceptional loads are legitimate. Measures disproportionate to the risk are not. Traffic management should be a) applied to all application / service

types equally and b) to all service providers equally (rather than favouring the service of a commercial partner of the ISP, or the ISPs own managed service).

Most importantly, traffic management intended, or likely to, discriminate against competing services should not be legitimate.

Given the lack of clarity about what constitutes reasonable traffic management, the CCIA believes the European Commission should provide guidance. European Commission guidance would provide clarity to ISPs, online service providers, consumers and national regulatory authorities such that the parties have a common understanding. Guidance should be prepared by the European Commission in order that it is common to all member states, thereby facilitating the development of the Digital Single Market.

Consideration should be given to the ongoing monitoring of traffic management practices and to sanctions to be put place in case of breaches of the guidance.

Blocking or throttling of particular traffic types that takes place without consumer consent should be considered unreasonable. Such consent could perhaps be gained implicitly through a well-developed and transparent traffic management policy.

Quality of Service offerings risk reducing, or at least limiting, the available capacity of users of the 'best-efforts' Internet leaving these users on a "dirt road".

It is CCIA's understanding that the most cost effective way of managing a congested network is to increase the available bandwidth rather than to deploy QoS. The European Commission should seek to understand the cost dynamics of these 2 solutions.

Question 5: (all respondents) Please provide your views on the following ways/situations where traffic management may be applied by ISPs. Are traffic management measures:

a) applied to deliver managed services (e.g. to ensure a guaranteed quality of service for a specific content/applications)

necessary appropriate **problematic (if the traffic management results in competing services being degraded).**

b) taking into account the sensitivity of the service to delay or packet loss
necessary appropriate problematic

Managed services” are sometimes also called “specialised services”. For the purposes of this public consultation both terms shall be deemed to be synonyms.

Please explain your response

c) used to implement or manage compliance with the explicit contractual restrictions (e.g. on P2P or VoIP) of the Internet access product accepted by the user
necessary appropriate **problematic**

Contractual restrictions that discriminate against a competing offer are problematic.

d) targeting types/classes of traffic contributing most to congestion

necessary appropriate problematic

Please explain your response

e) targeting heavy users whose use is excessive to the extent that it impacts on other users
necessary appropriate **problematic**
Please explain your response

Allowing users to choose a subscription with a relevant bandwidth cap is the appropriate response rather than specifically targeting heavy users.

f) applied during busy times and places, when and where congestion occurs
necessary **appropriate** problematic
Please explain your response

g) affecting all applications/content providers in the same way (application-agnostic)
necessary **appropriate** problematic
Please explain your response

h) affecting (similar) applications/content providers of the same category in the same way
necessary **appropriate** problematic
Please explain your response

i) used, without other grounds, against services competing with the ISP's own services

Problematic

Please explain your response

j) implemented at the full discretion of the ISP

Problematic

Please explain your response

k) other differentiation criteria (please specify) Please explain your response.

Question 6:

The use of managed services may affect the Internet access service in some cases, due to the sharing of access resources.

a) Please explain the impact of managed services on the standard Internet access service ("best effort") in terms of available bandwidth and quality of service.

A 2011 report of the French parliament¹ on net neutrality warns that prioritisation by ISPs of managed services over the 'best-efforts' Internet would cause the open Internet to degrade rapidly. Were this to happen it would have a considerable negative effect upon businesses providing online services to consumers and potentially chill innovation in this fast moving sector. In an era when Europe's competitiveness needs to be restored through the taking into use of services that improve productivity a de facto reduction in choice for consumers and businesses would have serious consequences.

Managed services are a separate category of service and exist alongside the open Internet and that should not be allowed to a) erode the competitive position of online services providers competing against the telecommunications firm's own service (eg voice calling vs Voip), or b) to degrade the quality of traffic delivery on the open Internet to the detriment of all services delivered online.

Given the economic and social consequences of the best-efforts Internet being degraded the CCIA suggests that the European Commission define the appropriate level of service to be maintained. Such guidance will better enable ISPs to know when the bandwidth available to the best efforts Internet is likely to fall below 'acceptable' levels, thus enabling better network planning.

b) Please explain whether it is possible to offer separate capacity for managed services and the standard Internet access service. If yes, please provide

¹ <http://www.assemblee-nationale.fr/13/pdf/rap-info/i3336.pdf>

information on the circumstances (costs, technologies) of separating them.

One fibre optic access line is one fibre optic line. As such, the burden of proof rests with the ISP to prove how they can fill capacity with managed services (or subscription video for example) without squeezing the bandwidth available for open Internet access.

Question 7:

a) Please give examples of "new business models" which could be developed on the basis of managed services by

(i) Network operators/ISPs: (ii) Content providers (on the basis of agreements with ISPs):

b) How important are these innovative business models likely to become in the next three years? Please substantiate your view by means of available forecasts or studies.

c) What would be the expected benefits in terms of innovation and investment through new businesses (content or applications) benefitting from guaranteed levels of quality of delivery through managed services?

ISPs should be free to innovate in the provision of managed services. Given the central nature of the Internet to the economy it is imperative that their control of the access network does not impede the innovations of other firms.

With regard to 7.c, it is not clear that applications and services delivered over the open Internet can benefit from a guaranteed quality of service. Given the number of interlinking networks end-to-end quality of service can only be delivered as a managed service.

Question 8:

What are likely positive and negative effects of certain traffic management practices on the Internet ecosystem, in particular on innovation and investment, by (i) network operators/ISPs and (ii) content providers? Please explain your view and, if appropriate, distinguish between different traffic management practices.

Traffic management by ISPs that discriminates between services it offers and those of another firm has negative effects. Such discrimination would cause immediate damage to the interests of online service providers, and signals that behaviour of this type is tolerated, would have a chilling effect on the Internet ecosystem. Any decisions about traffic management by a network provider should be independent of its upstream interests.

Question 9:

It appears that the implementation of traffic management measures requires ISPs to analyse certain information about individual data packets, for instance by

deep packet inspection (DPI) techniques. Please explain which type of information needs to be read by ISPs to implement the different traffic management measures. In which layer can this information normally be found?

No answer.

Question 10: a) Are there any privacy risks arising from the use of DPI for traffic management purposes, and, if so, what are the implications for transparency and consumer protection?

b) Are there alternative techniques for traffic management that do not involve deep packet inspection? Please provide examples and explain your response. Please compare those alternative techniques with deep packet inspection, in particular in terms of their effectiveness, potential impact on privacy and costs for operators.

No answer.

Question 11: (all respondents)

Where the user's consent is required for traffic management measures, particularly where such measures might entail access to and analysis of certain personal data by ISPs, please explain how (e.g. in which format) this consent should be sought by the ISP, what prior information needs to be provided by the ISP to the user, and how the user consent should be given, in order to optimise user awareness and user convenience.

No answer.

2. Transparency and switching (consumer choice)

Transparency is a key tool in the EU electronic communications framework to protect users and to ensure competition. Transparency enables consumers to optimise their informed choices and thus benefit fully from competition, in particular at a time when ISPs are developing new business models.

The BEREC investigation has revealed that many consumers have Internet access subscriptions with a number of restrictions. Moreover, the development of new business models is likely to lead to a broad range of offers which may contain different traffic management restrictions. These may address the needs or interests of specific consumers at prices which might not otherwise be available. It is, however, not clear whether ISPs are sufficiently transparent about such restrictions allowing consumers to make a deliberate choice. *Customers, therefore, need clear, meaningful and comparable information on any limitations of their subscriptions comprehensible to all.*

These requirements raise the question whether a restricted Internet access product may still be described, without qualification, as "Internet access" or whether the unqualified label "Internet access" should be reserved to (largely) unrestricted access offers. This debate has already been opened in some Member States and this public consultation seeks also views on this issue. Another aspect of transparency concerns broadband speed, and in particular possible discrepancies between advertised speeds and actual speeds.

Transparency should be complemented with measures aimed at ensuring easy switching from one provider to another, and from one offer to another offer of the same service provider, to empower consumers to choose the service which best matches their individual needs. The electronic communications framework facilitates switching of operators by imposing the obligation to implement number portability within one day, by limiting the initial commitment period in contracts with consumers or by specifying that the conditions and procedures for contract termination shall not act as a disincentive against changing service provider. It further specifies that subscribers have a right to withdraw from their contract without penalty upon notice of modification to the contractual conditions. It is also important to ensure that barriers do not arise as a result of the growing trend towards bundled services. This may require that switching processes and contractual arrangements are consistent between services offered in bundled packages, e.g. the most common "triple play" package of fixed voice, broadband and pay-TV.

2.1. Transparency and general characteristics of the Internet access offer

Question 12: (all respondents) In order to allow consumers to make informed choices, on the basis of clear, meaningful, and comparable information, which elements should be communicated to consumers?

- *Elements related to traffic management practices:*

a) Contractual restrictions (blocking, throttling, other restrictions on application use) **important**

Please provide reasons for your answer: **Contractual restrictions must be apparent at the moment when a consumer concludes the contract, or when a contract is modified. This allows the consumer to make an informed decision on whether the contract is appropriate for them.**

Any restrictions presented must be described in plain language that makes clear to the consumer or business what applications or services they would not be able to run, or other type of restriction.

b) Traffic management policy applied to prioritise certain traffic in specific circumstances- **less important**

Assuming that the definition of 'special circumstances' is well defined and infrequent then this should not be of primary concern to the consumer or business.

c) Whether and to what extent managed services may affect the quality of the best effort Internet (e.g. the possibility of the Internet connection being affected when watching IP- TV or when using other managed services) **important**

It is imperative that the consumer can avoid a service provider whose managed service offerings affect the quality of the Internet experience, *whether that consumer uses the ISPs managed services or not* (ie the consumer only takes Internet access from the ISP, but because other customers of the same ISP subscribe to the managed service quality may be affected).

It is imperative that data caps in an ISP's offering apply equally to its own managed service offerings as well as to the open Internet.

d) Other restrictions, please specify:

e) Data allowances (caps), download limits **important**

Data caps must be clear to the user such that they know i) if they are likely to incur supplementary charges if they exceed the limit and ii) they will be able to carry out the range of bandwidth consuming activities online they consider appropriate.

f) What these data allowances enable customers to do in practice (download x hours of video; upload y photos etc.)

important

For the data allowances to have any meaning they should be described in plain language and examples of practical use would be necessary. However, such information should be illustrative only as it would be impossible for the ISP to accurately predict usage. eg different length videos.

Elements related to speed and quality:

a) Average speed, typical speed ranges and speed at peak times (upload and download) **important** less important
measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile)

Please provide reasons for your answer:

b) Respect of guaranteed minimum speed (if applicable)
important less important

measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile)

c) What these speeds allow customers to do in practice (video-streaming, audio-download, video-conferences etc.)

important less important

Please provide reasons for your answer:

d) Latency/network responsiveness (a measure of traffic delay) and which services would be affected thereby (e.g. certain applications such as IP-TV or videoconferencing would be more seriously impacted by higher traffic delays in the network of the provider)

important less important

measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile) Please provide reasons for your answer:

e) Jitter (a measure of the variability over time of latency) and which services would be affected thereby (e.g. echoing in VoIP calls)

important less important

measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile)

f) Packet loss rate (share of packets lost in the network) and which services would be affected thereby (e.g. VoIP)

important less important

measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile)

g) Reliability of the service (network accessibility and retainability), i.e. measure for successful start and completion of data sessions

important less important

measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile)

h) Quality parameters for (mobile) voice telephony (call setup success rate, dropped calls, speech quality, other)

important less important

measuring technically feasible (fixed) measuring technically feasible (mobile)
currently measured (fixed) currently measured (mobile)

i) Other, please specify:

Question 13: (all respondents)

Some ISPs currently apply 'fair use policies', which give them wide discretion to apply restrictions on traffic generated by users whose usage they consider excessive. Do you consider that, in case of contractual restrictions of data consumption, quantified data allowances (e.g. monthly caps of x MB or GB) are more transparent for consumers than discretionary fair use clauses?

yes no

As per the answer given to question 12 and 12 (f) the CCIA believes that information provided to consumers and businesses must be in plain language and include examples. Such an approach provides a better understanding to consumers of what they are paying for and, importantly, does not leave decisions to the discretion of the ISP.

Question 14: (all respondents)

a) When should the elements of information referred to in question 12 be provided to the consumer by the ISP?

before signing the contract

regularly updated during the contract period

during the contract period if changes occur

other, please specify:

b) Which format (e.g. contract, general terms and conditions, separate and specific information, other (please specify)) do you consider appropriate to communicate this information to consumers?

This information should:

- **be presented to consumers in a separate and specific format. Were it to be contained in the customer contract it is unlikely to be apparent.**
- **be made available in a format that allows it to be presented by information aggregators and comparison sites such as price comparison engines. Once the data can be used and displayed by 3rd parties it is more likely to become part of the comparison used to make a purchasing decision.**

The dynamic nature of the internet ecosystem means that it would be preferable for traffic management information to be presented online allowing for easier adaptation.

Given the technical nature of the some of the information concerning traffic management, information on traffic management practices should be made available to public authorities (regulators, ministries) and consumer representatives so that policies can be 'decoded' by those with the expertise to do so and who represent the consumer interest.

Question 15:

What would be the (additional) costs for ISPs to (i) collect the various data mentioned in the table in question 12 (e.g. measuring of average speed, jitter, delay etc.) and (ii) communicate the information to their customers. Please provide an estimate of the above costs for your own company or an ISP of your choice explaining your assumptions and methodology, and details about the technical tools used to collect the various data. If possible, please provide a breakdown of the costs.

The CCIA understands that the effort put into producing the Google Fiber guidance on network management

<https://fiber.google.com/legal/network.html> is not onerous for an ISP.

Question 16: (all respondents)

a) In order to promote transparency and consumer choice, do you consider it necessary that comparable data on the Internet access provided by ISPs is collected and published by NRAs or another independent organisation?

Yes No

The CCIA believes that data should be compiled in a standard format (decided by the European Commission / National Regulatory Authority / Industry group) and be made available for use by information aggregators and comparison sites such as price comparison engines. Once the data can be used and displayed by 3rd parties it is more likely to become part of the comparison used to make a purchasing decision. Such a standard format and 3rd party use would considerably reduce the costs to ISPs of marketing the data to consumers.

Do you think this information should be broken down by geographic areas or different data plans?

b) What are the advantages and corresponding costs of this data collection and publication being undertaken by NRAs or by another type of organisation (please specify which one). Please provide an estimate at EU-level or for an EU Member State of your choice.

NRAs bring an objectivity to the choice of format and assessment of data. ISPs may be left to compile and publish the data once the format is agreed. However, self-published data should be independently verified from time to time.

Question 17: (all respondents) a) Do you consider it necessary to regulate the labelling as "Internet access" of subscriptions that restrict access to some Internet services, content or applications? **Yes No**

Please reason your answer.

Products and subscriptions that advertise “Internet Access” should provide access to any application or service on the Internet, as well as the ability to connect any hardware of their choice or programme of their choice. Arcep has developed useful guidance on this in its 2010 guidelines.² Offerings with a more limited access should not only use a different terminology, but *also* make clear what the limitations consist of so as to be meaningful to consumers. This is analogous to other misleading advertising and is already partly in place with operators often specifying the maximum data download per month as well as the maximum speed of a broadband connection.

b) If yes, which restrictions would be acceptable before a subscription could no longer be marketed, without qualification, as an “Internet access” product”?

Different speed offerings at different prices.

Clearly marked data caps.

c) What would be the consequences (including the cost) for ISPs if they were not allowed to market as ‘Internet access’ an offer with certain restrictions, or if such marketing was subject to mandatory qualification? Please provide quantification for your own company or an ISP of your choice explaining your assumptions and methodology.

It is likely that ISPs would find similar terminology associated with the Internet to market their offerings. As such focus is better placed not on the exact language, but on the clarity that ISPs provide as to what can or cannot be done over a subscription they sell.

2.2 Switching:

Question 18: (all respondents)

a) Please explain what barriers to switching ISPs still exist (if any) and how they can be overcome. Please mention in your reply all direct and indirect factors dissuading consumers from switching (e.g. obstacles linked to the terminal equipment, burden of proof regarding a possible breach of contract, etc.)

The market for fixed or wireless broadband connectivity is typified by a limited number of competing offers, thus constraining the number choices available to the consumer and meaning a reduced constraint on the behaviour of service providers. Assuming that an open internet offer is available on the market, and that this is transparent to the consumer, the following factors might dissuade a consumer from switching:

² ARCEP. May 2010. “Discussion points and initial policy guidelines on Internet and network neutrality.”

http://www.arcep.fr/uploads/tx_gspublication/consult-net-neutralite-200510-ENG.pdf

- the complexity of migrating a bundled subscription - where a consumer purchased a bundle (eg mobile + fixed broadband, telephony and television) it may be complex to migrate such a package. It may be that there is no equivalent package on the market, or that the hassle of migrating dissuades the consumer. The CCIA understands that Ofcom is carrying out a major project on the migration of bundled offers and encourages the European Commission to discuss this issue with Ofcom.
- Process complexity - switching processes that are managed by the gaining service provider tend to be simpler and speedier than those managed by the losing party. It is therefore important that switching processes are managed by the gaining party.
- Bundling of terminal equipment and subsidies - the bundling of terminal equipment has at times lead to situations where certain applications are removed from device software, thus diminishing the ability of such applications to compete with an operator's own offering.

The structure of the mobile telephony industry today sets a limit on competition; one way this could be modified by industry and policymakers is through the standardisation process. Today, the telecoms operator manages the customer subscription through a SIM card(s) that is physically placed in the device. Space limitations mean that a limited number of SIM cards, and therefore competing offers, can be placed.

Technological developments mean that 'software SIMs' could not theoretically be used to manage the customer subscription. This development will lead to space and cost saving in the production of mobile devices, but, more importantly, it will allow for *multiple active profiles* to be created by the customer with the service provider of their choice. A customer could, for example:

- create different profiles for each country they visit, thus introducing a greater degree of competition into the roaming market;
- create different profiles with different service providers for voice and data connections; these could be active simultaneously;
- Profiles would be customer managed and changed as often as the consumer deemed desirable (every day, once a year etc)
- a theoretically limitless number of profiles would mean that new providers could come into the market, with most being virtual capacity providers that are buying capacity wholesale from spectrum holders.
- ICT sector companies managing existing consumer and business relationships could integrate subscription management into their offering, many already having the systems that would enable this.

CCIA suggests that the European Commission actively monitors the work

of the ETSI committees already working on embedded SIMs (software SIMs). Voting rights within ETSI will allow established interests to preserve their 'bottleneck' position without regard for what might be best for the wider industry or society. Oversight is therefore required.

The cost of facilities based competition in fixed broadband provision is such that the competitive environment cannot easily be improved, with the obvious ramifications for switching. Given the need to encourage investment in next generation infrastructure, and the need to preserve competition, CCIA believes that equivalence models (such as those introduced at BT Openreach) should be examined.

b) How should an ISP inform consumers of changes to their packages?

Changes to network management policies should:

- be made available on the ISPs website
- be sent to customers having chosen to receive email by email
- made available to retailers

Where an Internet offering is made more restrictive this message should be actively pushed to customers.

c) What actions by an ISP would constitute a breach of contract or modifications to the contractual conditions which would enable a consumer to be released from a contract?

Where an Internet offering is made more restrictive.

d) Should customers be able to easily opt out from certain contractual restrictions (up to a completely unrestricted offer) by the same operator?

Yes No Please explain your response. If yes, how could this be facilitated?

No answer.

e) Do you think that a customer should be allowed to switch to another operator within a reduced contract termination period in case his/her current operator does not at all offer an unrestricted Internet access product or does not allow switching to such unrestricted offer?

Yes No

Question 19: (all respondents)

While there may be valid (technical) reasons why consumers do not always get the advertised service speed or quality, should there be a limit on the discrepancy between advertised and actual service parameters (e.g. speed)?

Yes No

Please explain your response. If you consider that there should be a limit on the discrepancy, how should this limit be defined?

Discrepancies should be looked at in terms of the frequency of the deviation from the norm. Exceptional incidents should not be of great concern, but it would be beneficial to define 'exceptional' so that this excuse is not abused. An example definition would be 'not more than once per month'.

Question 20: (all respondents)

Pursuant to Article 30 (6) of the Universal Service Directive conditions and procedures for contract termination shall not act as a disincentive against changing service providers. How could changing of operators be facilitated? Please provide examples and explain your response.

Please the answer to question 18. This would greatly facilitate changing of service providers for wireless service as the customer would control the process within the constraints of the agreed contract. The ISP would no longer act as a gatekeeper.

Question 21: (all respondents)

How could the transparency of bundles (packages including telephony, Internet, TV) be improved for consumers and how could switching be facilitated in the presence of bundles?

Where a consumer has purchased a bundle (eg mobile + fixed broadband, telephony and television) it may be complex to migrate such a package. It may be that there is no equivalent package on the market, or that the hassle of migrating dissuades the consumer.

The CCIA understands that Ofcom is carrying out a major project on the migration of bundled offers and encourages the European Commission to discuss this issue with them.

Question 22: (all respondents)

a) How important would be the benefits for end-users of improved transparency and

facilitated switching?

very important **important** slightly important not important

Please explain your response.

Transparency facilitates switching, but the number of providers in the market and the ease of switching between them will be the factor that constrains any anti-competitive conduct.

b) What would be the expected benefits in terms of innovation by new

businesses (content or applications) as a consequence of improved consumer choice and increased competition between ISPs?

Improved consumer choice and increased competition within the current framework is likely to ensure a better balance between consumer demand, price and offer. With respect to the open Internet, it is likely to ensure a better and more stable access to all applications and services.

In turn, this is likely to create greater confidence in the entrepreneurial and investment communities that consumers will be able to access online services (particularly where those services may be disruptive to telecommunications firms) thus avoiding any chilling effects. It is important to remember that the potential for arbitrary change to traffic management policies gives ongoing cause for concern to investors and entrepreneurs. It is important that that European Commission guidance, and subsequent oversight measures give a stable framework that provide confidence to ISPs and application and service providers as to what is 'reasonable'. Such confidence is also likely to create the basis for the development of bandwidth intensive services, and subsequently demand for higher bandwidth connections, thus benefitting ISPs. This virtuous cycle is examined by Plum Consulting in their report 'The Open Internet - a platform for growth'.³

More broadly a positive and stable framework for applications and services will have a positive effect for the Internet Economy at large. Numerous studies have examined the direct economic effects of the Internet economy (job creation, contribution to GDP growth), but equally the indirect effects on productivity and overall economic competitiveness. Some key statistics include:

- **OECD Internet Economy Outlook 2012 report states that 'Top ICT firms are also adding jobs hiring 14 million people in 2011, a 6 percent increase over 2010, with Internet firms outperforming the sector.'⁴**
- **Copenhagen Economics estimates that Internet platforms contribute 160bn EUR per annum to EU GDP directly, with a further 150bn EUR indirectly through productivity gains⁵**

³ 'The Open Internet - a platform for growth', Plum Consulting, October 2011
http://www.plumconsulting.co.uk/pdfs/Plum_Oct11_The_open_internet_-_a_platform_for_growth.pdf

⁴ <http://www.oecd>.

⁵ 'Online Intermediaries: Assessing the Impact of the EU's Online Liability Regime, January 2012
<http://www.copenhageneconomics.com/Files/Filer/Intranet/Documents/1253-01%20Edima%20Online%20Intermediaries%20Report%20FINAL%2010JAN2012.pdf>

- **The European Commission estimates, based on McKinsey figures, that for every job lost through the shift to digital, 2.6 are created, accounting for 25% of total job creation⁶**

Question 23:

Would the facilitation of switching for consumers trigger any (administrative) costs for ISPs?

Yes No

That clearly depends on what measures would be adopted. It is likely that the primary disadvantage for ISPs is the greater degree of competition and a possible incentive to increase marketing budgets. A switching process that was driven efficiently by the gaining party would in itself reduce the cost of the process.

The 'software SIM' with multiple active profiles model that is outlined in answer to question 18 would result in a consumer controlled process that would logically be at a lower cost for consumers with the operator's administrative layer having been removed.

3. IP interconnection issues

Interconnection arrangements between networks take the form of transit and peering agreements. They have traditionally been based on the "best effort" principle. Disruptions of interconnection or deterioration of interconnection service quality at the wholesale level could lead to a situation where end-users and content providers cannot reach all destinations on the Internet. IP interconnection is therefore relevant for this consultation.

Question 24:

a) In your view, are there any problems regarding IP interconnection arrangements (between network operators, ISPs, transit providers and/or content providers) that could have an impact on the quality of the best effort Internet?

Yes **No**

Please explain your response. **The IP interconnection market, as a competitive market, reacts to situations dynamically (establishing new peering, adding capacity etc).**

Were interconnection or peering to be refused this could limit access to the Internet with the possibility of impacting downstream competition where a smaller ISP cannot offer access to the entire Internet at a reasonable cost.

⁶ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0942:FIN:EN:PDF>

b) Are there any specific issues related to the vertical integration of ISPs and transit providers?

Yes No

The recent decision of the French competition authority in relation to Cogent and France Telecom illustrates that there is a danger of margin squeeze where the ISP and transit operator are part of the same company and not functionally separated.

See

http://www.autoritedelaconcurrence.fr/user/standard.php?id_rub=418&id_article=1971

Question 25:

Direct peering, Content Delivery Networks (CDN) or Quality of Service Interconnection (between ISPs and content providers) are being developed to propose an enhanced quality of service for content providers and end users.

- a) What role can they play in reducing the risk of network congestion?
- b) What opportunities and threats do they constitute for: (i) ISPs, (ii) content providers, (iii) transit providers and (iv) end users?
- c) Are there any barriers of a regulatory, technical or business nature that prevent market players other than ISPs from playing a more important role in reducing the risk of network congestion?

Content Delivery Networks allow services maximise efficiency and quality, but only up to the exchange point. Their role is important in the consumer experience.

Question 26: (all respondents) a) Do you consider that intervention by public authorities is necessary at this stage?

Yes No

The ongoing uncertainty over telecoms operators ability to discriminate against services that compete with their own creates a chilling effect for potential investors and innovators. Given the economic situation this is a disincentive that we can ill-afford. To create a stable framework the CCIA believes that the European Commission should:

- Issue a Recommendation clarifying existing legislation in relation to the open Internet
- Describe what the “best efforts” Internet looks like and below what level it should not fall

- Describe what it sees as reasonable and unreasonable network management practices
- Encourage National Regulatory Authorities to monitor traffic management practices in an ongoing fashion (to avoid sudden and arbitrary changes).
- Encourage the development of codes of practice in conjunction with ISPs as to reasonable network management (examples from UK, Norway, Japan and others) and based on the EC's views of what constitutes 'reasonable' and 'unreasonable' network management.
- Develop a standard set of comparable data to be presented in a standard format for use by 3rd parties (eg comparison websites)
- Engage consumer protection authorities to be to be made part of the supervision of traffic management practices

In the event that the above practices do not create the stable framework for innovation that is so important for the Internet economy the European Commission should indicate its willingness to introduce legislation. Failure to act may see member states taking action in this field and a fragmentation of the Digital Single Market. To this end the European Commission must maintain a regular dialogue with national telecommunications and consumer authorities to understand in-market developments.

b) What would be the consequences of divergent interventions by public authorities in the EU Member States?

In the worst case divergent approaches will cause a further fragmentation of the Digital Single Market as consumers in different member states will have access to different offerings and businesses will not have an equal opportunity or incentive to serve. A successful framework for the open internet will dynamise the sector for online service provision in a manner that will a) benefit the European economy greatly and b) provide a launch pad for European start-ups to take advantage of such a framework.

Question 27:

a) Have you made use of the dispute resolution powers under the Framework Directive in relation to a dispute about traffic management practices?

Yes **No**

b) Have you also made use of these dispute resolution powers also in relation to disputes between an ISP and a content provider?

Yes **No**

c) If you have made use, please explain under which circumstances. If you have not made use, please explain whether you consider that these dispute resolution powers would be an appropriate tool for such Internet traffic management disputes?

See in particular Article 20 of Directive 2002/21/EC (Framework Directive) which allows either party to request a binding decision by the NRA to resolve a dispute within the shortest possible time frame and normally within four months.

Question 28:

Do you consider that regulators should monitor interconnection agreements between providers?

Yes **No**

BEREC has examined the market for IP Peering and found it to be competitive. Therefore, such agreements do not necessarily need to be monitored by regulators.

Question 29: (all respondents)

Under article 22(3) USD NRAs have the power to set minimum quality of service requirements on undertakings providing public communications networks. In a scenario where in a given Member State no unrestricted offer is available (for instance because all operators actually block VoIP), do you consider that the "minimum quality of service tool" should be applied by the NRA to require operators to provide certain unrestricted offers?

Yes No

Were a situation to arise in which no ISP offered access to eg VoIP it would be apparent that competition is not yielding the consumer benefits expected of a competitive market. This should provoke the NRA, if it is monitoring traffic management practices, to consider whether there is adequate competition in the market and whether there is adequate transparency. In the short term, it may be that the NRA needs to impose a minimum QoS standard. To this end, it will have been of benefit if the European Commission has already developed a framework on 'reasonable' network management.

Your response must reach the Commission by 15 October 2012!