

Response to DG INFSO's Public Consultation Questionnaire on:

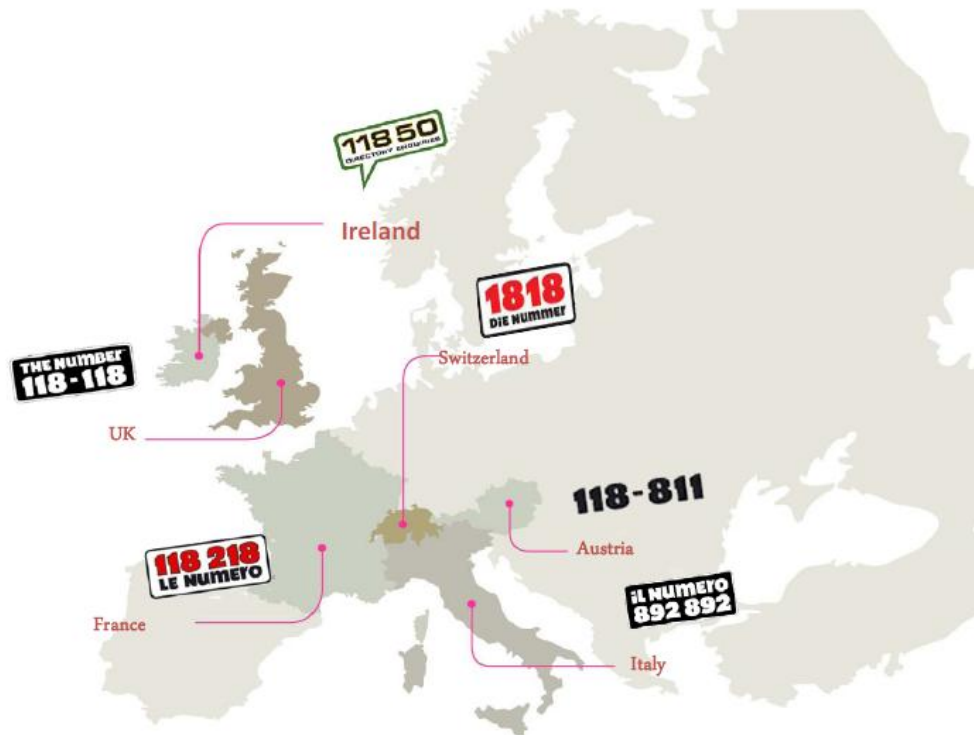
Open Internet and Net Neutrality in Europe



THE NUMBER

Introduction to The Number

The Number is the largest provider of directory enquiries services in Europe with operations in 5 EU Member States and Switzerland.



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Preliminary Remarks

The Number welcomes the opportunity to comment on DG INFISO's Consultation on Open Internet and Net Neutrality in Europe (hereafter "the Consultation").

The Number especially welcomes the fact that DG INFISO's approach is one of unbiased information gathering through this questionnaire, but hopes this does not indicate that several additional steps will be required after this consultation for the Commission to decide what is required to preserve an open Internet in Europe.

The Number brings to this consultation its experience of an existing two-sided market in the voice and SMS sector, namely the "Premium Rate Services" (PRS) model. The PRS model is a good illustration of how access bottleneck operators can behave in an abusive manner if certain structural elements are lacking. Two-sided markets such as PRS and internet traffic management need a clear structure to govern access mechanisms and commercial interactions between the two-sides, to encourage best practise:

1. setting out the limits of permissible behaviour;
2. identifying what constitutes fair and unfair behaviour; and
3. establishing a quick and simple mechanism for resolving disputes regarding behaviour that is alleged to be unacceptable or unfair for consumers and competition.

These elements must be addressed if the mistakes of the past are not to be repeated. Establishing the approach we have identified can ensure a clear and fair environment for investment, innovation and consumer benefits.

In many cases, **transparency provisions will be insufficient** to ensure fair competition and consumer protection due to the complex nature of the product and any intended limitations. If consumers cannot readily understand the nature of the policies or limitations being disclosed to them, then transparency of product limitations combined with a competitive market will not necessarily result in limitations being 'competed away' as consumers will not be influenced by transparency requirements. Moreover, as we set out in details below, competition in itself will not necessarily avoid abusive behaviour occurring, as the issue of net neutrality is one that centres on the abuses stemming from a bottleneck, not necessarily from a dominant position.

Question 1: Is there currently a problem of net neutrality and the openness of the internet in Europe? If so, illustrate with concrete examples. Where are the bottlenecks, if any? Is the problem such that it cannot be solved by the existing degree of competition in fixed and mobile access markets?

Reported Problems

Several cases have been reported and statements by some access operators seem to indicate that ISPs are deciding (or are on the verge of deciding) what is accessible or not over their pipes.

In their legal analysis on network neutrality¹, Valcke, Hou, Stevens and Kosta notably list the following cases:

“In Europe, some network operators have reportedly blocked VoIP and peer-to-peer systems (Geist, 2005). Similarly, the removal by some UK mobile operators of VoIP functionality from Nokia N95 handsets in 2007 also triggered network neutrality concerns (Truphone, 2007). Prioritisation, which implies a higher level of traffic shaping than blocking or degradation, has not yet been fully installed by network operators. Nevertheless, PlusNet, a UK-based network operator, has already started selling prioritised services based on different types of Internet applications. Last but not least, several network operators have also expressed their intention to discriminate against some Internet content providers (Save the Internet, 2008).”

The Number considers that allowing ISPs to take on such a gatekeeper role is a dangerous trend that is bound to restrict users' choice.

Bottleneck

The Number agrees with the fact that the Consultation links threats to the open internet to an issue of bottleneck. Too often, regulators' reasoning is based on the Article 7 process of definition of a relevant market, designation of an SMP provider and choice of remedies. By following this reasoning, regulators are likely to conclude that as the relevant market in the context of the Internet is “competitive” and hence not a “relevant” market, no single player has dominance and thus there is no incentive to behave in an abusive manner. This is not an acceptable path and it certainly does not reflect reality, as we describe in the section hereunder.

Competition

The Number believes that competition will not, on its own, solve the issue of existing threats and assaults on the open internet.

Moreover, the degree of competition in Europe should not be overestimated.

In the mobile sector, the market is generally an oligopoly, if only due to the scarcity of spectrum and the limited number of licences delivered.

¹ Valcke, Hou, Stevens & Kosta, “Legal Analysis of Network Neutrality under EU Competition Rules and the Regulatory Framework for Electronic Communications”, *Draft Article submitted to ICFAI for publication in a book on network neutrality*.

While the mobile market is generally considered competitive if one looks at the theoretical principles, The Number would like to point out two realities:

- For small service providers needing a certain volume of traffic, not being accessible (or being accessible at unreasonable conditions) on one single mobile network makes their business case flounder. This is true for The Number as a directory service in the voice world, but it is equally true for small players in the Internet world.
- In the UK, one mobile operator suddenly significantly increased the retail tariffs paid by end-users to access directory services and this had a cascading effect on its competitor networks, which then followed suit. This example is however not confined to the UK, nor to Directory Enquiries. In Spain, the Spanish regulator CMT had to equally intervene in a dispute between a Premium Rate SMS Provider and all 5 Spanish MNOs, after the PSMS Provider complained about the wholesale rates of PSMS being four times the wholesale price for regular SMS between subscribers.² One can hardly see what competitive forces are at play in cases like this, and it does not bode well for the future of the internet should a two-sided approach be adopted without guidance and control.

In the fixed network, whilst there may be a larger number of ISPs, in most Member States there is a core of just 3-5 infrastructure providers, most other ISPs being resellers of the products of the latter. It is to be expected that any limitations imposed on the networks of these handful of 'big players' who provide the wholesale products would impact the resellers' service offering.

Incentives to abusive behaviour

Practice shows that market players can act abusively even when not having SMP (i.e. "in a competitive market"), as pointed out by the OECD in its 2007 report:

*"Anti-competitive behaviour can appear in all types of markets, even those judged to be competitive (...). Therefore, regulators cannot simply count the number of data providers in a given region and assume that the market is sufficiently competitive. Regulators may need to undertake a careful market analysis to determine whether households have effective choices for substitutable broadband Internet access. Which Internet access technologies constitute substitutable broadband will be a key issue in determining market competition."*³

In terms of incentives for this abusive behaviour, favouring a preferred partner or a company's own service or content is an obvious incentive.

This is illustrated currently in the UK, where the incumbent operator BT is moving from one technology (voice over legacy PSTN) to another (managed VoIP/VOB) in a manner which is restricting consumer choice and restricting competition more on the new technology.

Consumers cannot use BT's managed VoB service (BT Broadband Talk) to access services such as 118118 (the most called phone number in the UK and the market leading Directory Enquiries service) that are available via traditional PSTN calls on BT's network. BT has "over two million

² CMT Decision of 22 July 2010, Alterna Vs. Spanish MNOs.

³ OECD Paper on « Internet Traffic Prioritisation : An Overview », April 2007, DSTI/ICCP/TISP(2006)4/FINAL, p. 28.

*registered consumer customers*⁴ for its VoIP-based services such as BT Broadband Talk and BT Softphone. Only 118500, BT's own Directory Enquiries (DQ) service is available for customers of BT Broadband Talk. BT asserts that they are open to commercial negotiations, yet it is notable that BT has not agreed to provide access for any competitor DQ services over BT Broadband Talk yet, despite discussions having started over 2 years ago.

After a year of negotiations, the lowest proposed charges to The Number for BT customers to be able to call 118118 from BT's managed VoB access services are over 15 times the level of charges today levied by BT for their customers to call 118118 from traditional landline services, despite VoB services typically having lower running costs than traditional networks.

This is an example of an incumbent's approach when it believes it is 'outside' regulation for wholesale and retail services. It is also an example of a so-called 'two-sided' market, and the risks this entails when the bottleneck access providers' behaviour is not framed by a set of explicit rules.

In the UK (and most other Member States), regulatory rules on BT's traditional landline network have been clear and have delivered open, non-discriminatory access to service providers like The Number to offer their services to customers. BT charges a regulated, cost-orientated price for BT to bill their customers for 118118 calls made from traditional fixed lines. A similar situation must be replicated when incumbents leverage their market dominance into the IP environment, especially as access will remain an enduring bottleneck.

Achieving open access will **extend** consumer access to improved communications services and content. Failure to create this environment now will mean large operators stifle innovation and competition, and consumers will suffer.

Such a scenario should not be allowed by the Commission and national regulators and absent ex ante guidance, it is quite likely that it will be replicated to other services and applications, using voice or data.

On top of that, incentives can go beyond the will to favour a subsidiary or "preferred partner" and relate to control of what happens on the network. Access operators have clearly indicated their fear that infrastructure is becoming a commodity, the IP packets that flow over it being the real added value. Monetising or otherwise controlling the flow of those packets puts access operators in the position where they can choose how to extract maximum value from that control of IP packets, even if it means degrading the service available to consumers rather than being the "dumb pipe" that serves the IP packets as efficiently as possible. This dimension should certainly not be ignored by the Commission, especially in light of the past illustrations of the increased possibilities of abuses and diminished consumer choice in the context of vertically-integrated consortia in the infrastructure and content industries.

⁴ BT Group - 2008 Annual report

Question 2: How might problems arise in future? Could these emerge in other parts of the internet value chain? What would the causes be?

From an infrastructure point of view, bottlenecks in the broadband access network affect both end-user access points and traffic handover points between ISPs, in the situation where, for example, two ISPs with big differences in traffic volumes, one having more outgoing traffic whilst the other has more incoming traffic. In this situation, the incoming traffic-type (which would typically be an ISP focussed on offering Internet access to consumers) is likely to throttle at the handover point, not at the end-user's connection. These bottlenecks are specifically worrying as they are much more difficult to spot and demonstrate than end-user bottlenecks by an NRA (and even more by a consumer that will simply see his user experience decrease, without knowing who or what to blame).

It is also important to realise that backhaul is the weak link in establishing a competitive landscape in broadband access, as it is still typically the monopoly or near-monopoly of the incumbent with SMP. In other words, the issue of access bottlenecks must be looked at by the Commission and NRAs not only at the level of the last mile but also as regards the (lack of) competitive landscape for backhaul products.

Question 3: Is the regulatory framework capable of dealing with the issues identified, including in relation to monitoring/assessment and subsequent enforcement?

The key principles to ensure an open Internet are present in the regulatory framework but require additional clarifications and guidance to be issued by the European Commission to ensure a harmonised approach is taken by policy-makers and regulators at national level, and "grey" areas are clarified to the benefits of users and innovation.

This is especially needed as the available tools are unlikely to be effective:

- Looking at the Art 7 Procedure approach in the Telecoms Package, it is quite likely that in case of 'net neutrality' issue, the relevant market that would need to be looked at would be the retail broadband market, which is not part of the markets listed in the Relevant Markets Recommendation, and which was never defined or analysed by an NRA under the Article 7 procedure. The market hence not being 'relevant', no ex-ante remedies could be imposed.
- Alternatively, one could consider that the 'end-to-end' connectivity principle put in place by Article 5 of the Access Directive, which does not require an SMP finding for NRAs to impose obligations on operators to provide access on fair, reasonable and non-discriminatory terms, could be a possible tool. However, as is the case with the SMP regime, Article 5 applies to "access and interconnection" issues, which would not cover many issues faced by content, service or applications providers faced with discriminatory or abusive behaviour by an ISP.
- The consumer protection principles put in place by the Universal service Directive which covers such principles as transparency and the possibility for NRAs to set minimum quality of service requirements. However, as stated in our response to question 5, transparency alone is insufficient. As to minimum quality of service requirements, whilst this could be an interesting tool, it would require serious guidance as regards methodology and metrics.

- Ex post competition law could also play a role, but has its own limitations. If blocking an application or service could fall under the competition law provisions relating to “refusals to supply or deal”, such refusal is only deemed against competition law in the context of a dominant operator owning an essential facility. More importantly, if an access provider degrades a service, competition law can be applied if the said operator is dominant and behaves in a discriminatory manner. But it is uncertain that, should there be two separate offerings by access operators, one of Internet access and one of managed services, that these would not be deemed to be in different markets. Should this be case, an operator could degrade the quality of service for all content, services, and applications providers on Internet access by creating a dirt road effect, which might not be covered by competition law rules, but should trigger an NRA intervention under Article 22 of the Universal Service Directive.

Ultimately, the Commission could do a lot to help by enabling a dialogue between all stakeholders and giving additional guidance to member states regarding the need for access operators’ behaviour to be transparent and non-discriminatory, and what this could mean in practice to NRAs and end-users (consumers and businesses alike). The Norwegian approach is in that sense quite interesting as it resulted in a set of “Guidelines for Internet neutrality”⁵ which are the result of a constructive dialogue between all stakeholders with the NRA acting as a facilitator. Moreover, the principles included are flexible enough to adapt to technological change, whilst they provide sufficient guidance to allow an intervention in case of their violation.

Question 4: To what extent is traffic management necessary from an operators' point of view? How is it carried out in practice? What technologies are used to carry out such traffic management?

Before even answering the question, it is important to define what one understands as covering ‘traffic management’. Best effort management does not necessarily imply **no** prioritisation but may be split into multiple categories of traffic management:

- engineering to make the network function properly – to be managed in a non-discriminatory fashion
- commercial traffic management - tiered-approach
- security traffic management – blocking spam etc
- legal traffic management – child pornography, terrorism etc

Traffic management that is intended to block spam or child pornography has never been contested as being useful, whereas other forms motivated by commercial discrimination are more problematic and unlikely to generate consumer value, and certainly not choice.

⁵ See <http://www.npt.no/ikbViewer/Content/109604/Guidelines%20for%20network%20neutrality.pdf> (last visited July 2010).

Question 5: To what extent will net neutrality concerns be allayed by the provision on transparent information to end users, which distinguishes between managed services on the one hand and services offering access to the public internet on a 'best efforts' basis, on the other?

Transparency alone is not enough

Transparency is **not** sufficient to guarantee consumer choice and market innovation, unless it is combined with certain safeguards, especially a non-discrimination requirement.

In many cases, even though from a strictly regulatory point of view markets may be deemed competitive, the reality is that mobile and fixed access are generally oligopolistic and most users do not have a big choice in service providers to switch to if not satisfied (we refer also to our answer to question viii below regarding the practical impediments to switching).

Moreover, in practice, it must be noted that “consumer choice” implies that consumers be aware of all the content, services and applications that are available on the Internet, so that they would be aware that access to a given website, service or application is blocked or hindered. If users are pushed into walled gardens, they will initially spot the fact that major applications or sites are not accessible (or only accessible at low quality), such as YouTube or Skype, but they will not know “what they are missing” for a raft of smaller applications and services that may be “less” visible or known currently. The Number therefore strongly opposes any blocking or degradation of any legal content, service or application providers over the Internet, and considers transparency on its own an insufficient tool. Transparency is a particularly ineffective tool if the information which it must convey is particularly complex or granular as many consumers do not understand the information and so do not act on it. This has been evidenced by a plethora of Credit Card regulations that have failed to achieve clarity and action by consumers.

The Number has experienced the limitations of transparency as a remedy for competitive issues. When UK consumers decide to subscribe to BT’s Broadband Talk package (see our answer to question 1), when using their VoB service, they can only access BT’s own directory services, but not to any of its competitors (including 118 118, the most called number in the UK). Consumers are probably informed of this fact in the small print of their contract but this transparency is of no effect as access to a specific directory service number is too small an issue to determine a consumer’s choice of access service. The UK regulator Ofcom treats retail broadband as a competitive market so BT knows perfectly well that under the current rules and considering Ofcom’s approach to the definition of relevant markets, it is unlikely to risk regulatory intervention. The end-result is the squeezing out of all BT’s directory services competitors from BT’s VoB services. Such a scenario should not be seen as a one-off, and is likely to repeat itself in the future for multiple services and applications considered as being in competition with access providers’ services.

Barriers to switching must be removed to make transparency relevant

Before even considering users' ability to understand and act upon information, the first issue to consider is the practical barriers that exist to switching. The theory is that an unsatisfied broadband user can just move to another provider to get a better offer. This ignores various practical impediments:

- (1) in the mobile industry and to a lesser extent in the fixed, operators tend to align their offers as demonstrated by the VoIP blocking by all MNOs in France and Germany under their "fair use" policies, due to the oligopolistic nature of the market.
- (2) barriers to switching go beyond cost and administrative burden, to also cover such things as the lack of "email address" portability for end-users that rely on the email address that was given to them by their ISP and which they can't take with them when switching to another ISP (or even ask for it to be forwarded to their new email for a limited time period at no cost).
- (3) there have been significant issues in ensuring that consumers have access to, and understand, the headline broadband speeds advertised in the UK (e.g. 8MB broadband). If consumers have difficulty understanding this headline concept and what may affect the overall performance of their internet access, it is reasonable to be sceptical about the degree of useful understanding they will glean from more granular and technical information regarding traffic management policies.
- (4) comparing non-standardised transparency policies is likely to be highly complex and too onerous for most consumers to do.

Question 6: Should the principles governing traffic management be the same for fixed and mobile networks?
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The nature of mobile networks and scarcity of spectrum imply that these networks have inherent limitations, whereas fixed networks are mainly faced by limitations in term of lack of investment in upgrades by access operators.

On fixed networks, congestion in the past has been to a large extent handled by access operators through the upgrading of their networks. This logic is what has motivated the growth of data traffic over the years and the evolution from ISDN lines, to ADSL, ADSL +, VDSL, etc. There is a delicate balance to be held between allowing access operators to manage their traffic in order to minimize failures due to congestion, and removing every incentive for them to upgrade their networks to offer users access to the content, services and applications of their choice.

These differences do not however entail, in our view, that the **principles** applying to mobile and fixed networks should be different. It is rather a case of setting the same set of principles but accepting that in reality they may be implemented in a way that is coherent with the different capabilities of mobile and fixed networks. In other words: non-discrimination and transparency should mean the same thing regardless of the underlying infrastructure, even if the quality requirements may differ from one infrastructure to another.

Question 7: What other forms of prioritisation are taking place? Do content and application providers also try to prioritise their services? If so, how – and how does this prioritisation affect other players in the value chain?

Looking at the broader Internet value chain, The Number is aware of the fact that some broadband access operators have been alleging that there is a “blurring” between the various sectors in the Internet “ecosystem” such that any rules should extend beyond last-mile broadband providers. The fact is however that, in the “Internet ecosystem”, content simply is not the same as infrastructure, and access bottlenecks simply are the key issue that regulators should focus on.

Question 8: In the case of managed services, should the same quality of service conditions and parameters be available to all content/application/online service providers which are in the same situation? May exclusive agreements between network operators and content/application/online service providers create problems for achieving that objective?

Yes. The Number believes that managed services should be offered in a non discriminatory manner. Discrimination, in the context of traffic management, should be defined as “treating **equivalent** products, content, services and applications in a **different** manner”, usually for commercial motivations. We cannot see a context where this would **not** be unfair or abusive, and hence reject the idea that ‘exclusive agreements’ could be acceptable.

Question 9: If the objective referred to in Question 8 is retained, are additional measures needed to achieve it? If so, should such measures have a voluntary nature (such as, for example, an industry code of conduct) or a regulatory one?

We refer to our comments regarding the definition of traffic management (see Question 4) and the fact that this concept encompasses many different practices, some of which are accepted by all players in the value chain, whilst others are much more controversial.

From a general point of view, if no clear ex ante guidance is in place that reassures developers and producers of content that their services, applications and content will be available to all users wishing to access them, how will they find the investors willing to fund their inventions and creations? The Internet was built on the principle of “innovation without consent”. Yet if every innovator, from even the smallest village of Scotland or Lithuania, has to negotiate SLAs with every access operator on earth wishing to leverage the “two-sided” market argument at them, then the innovation and business models epitomised by the “two guys in a garage” internet start-ups simply ends and the Internet will move to being dominated by only the largest companies with the most money.

The Number considers that this balance could be found in the approach outlined by the French regulator ARCEP in its recent consultation on net neutrality. ARCEP proposes to allow access operators to differentiate between “Internet access”⁶ and “managed services”⁷.

⁶ Defined by ARCEP as “a service that consists of providing the public with access to online communication services. This service provides the public with the ability to send and receive data by using the IP communication protocol, from all or virtually all points, designated by a public Internet address, from all of the interconnected public and private networks around the world that make up the Internet”.

This distinction would however need to be accompanied by a set of principles, some of which are part of the “directions” proposed by ARCEP:

1. The central principle should be that users should be the ones choosing which content, services and applications they access. ISPs acting as gatekeepers should not be allowed.
2. Internet access should be offered under the “best efforts” principle, in a net neutral and open manner.
3. Managed services could be offered under a Quality of Service SLA but they should always be offered on a non-discriminatory basis and under fair and reasonable terms. Broadband providers should not be permitted to leverage their control over broadband networks to extract “prioritization” fees from third party applications and content providers without proper scrutiny. There is a serious risk of creating a “Premium Rate Services” model on the Internet. Experience in the copper voice world shows that many abuses have occurred in the PRS sector over traditional voice. In some countries, this has required regulatory intervention to ensure access to third party services and reasonable access charges to be levied by operators. In other countries such as the UK, it has shown the limits of the regulatory framework and the difficulties for a regulator such as Ofcom to intervene against abusive behaviour by operators with bottleneck control of access. Similar services should be offered equivalent conditions, and regulators should ensure that even when offering a managed service under non-discriminatory terms, an integrated access provider does not offer unfair and/or unreasonable terms, knowing that its own affiliate might be paying those terms as a left pocket / right pocket operation, whilst all competitors suffer from it.
4. Labelling a service as “something other than the Internet” (3G, high quality services, etc) should only be deemed to be acceptable under certain conditions, otherwise this approach can be misused to bypass regulations via marketing (e.g. calling something a “managed service” to escape obligations of openness choice delivery related to the “internet”).
5. The balance between the bandwidth reserved for “Internet access” and the capacity allocated to “managed services” should not lead to a “dirt road” effect for the Internet (see our response to question 11 for more details).

As indicated in our preliminary remarks, the Number, as a directory service, has direct experience with the concept of a two-sided market in the telecoms sector, albeit one very much controlled by the bottleneck access operator in terms of prices. The logic followed for all PRS is one whereby consumers pay a price to the access operator to be able to reach a service (e.g. 118118) and where that service gets a portion of the revenues from the access operator. In the case of mobile access to directory services in the UK, it is actually a “worst case scenario” of a two-sided market as **The Number has no control over the retail price charged to end-users for contacting its UK 118118 service, and cannot buy a wholesale origination product from mobile operators, so has no certainty of revenue share either.**

The end-result of this two-sided market approach where commercial negotiations are supposed to prevail is abusive hikes of retail prices by mobile access operators to end-users for accessing 118118,

⁷ Defined by ARCEP as « services providing access to content/services/applications through electronic means, marketed by the network operator which guarantees certain specific features thanks to the process it uses on the network it owns and operates. Some of the classic features include reliability rate, minimal latency, jitter (variation in time between packets), guaranteed bandwidth, security level, etc.”

in the UK and an absolute absence of mechanism for The Number to be able to influence and control this. The rationale behind it is not even always one of discrimination between the access operators' own service and that of competitors. It is quite frankly one of "milking" a service where deemed possible, because users may not notice it, regulators are unlikely to intervene and the operator does not care if the service ends up going belly up as a result of its abusive behaviour (as access operators often control rival directory services of their own). The two-sided nature of the market is not one where choice and commercial negotiation prevails at each end - it is one where both end-users and service providers such as The Number get the worst possible deal, to the benefit of a bottleneck access operator. Such a scenario could be what the future Internet turns into, if no guidance is put in place.

Question 10: Are the commercial arrangements that currently govern the provision of access to the internet adequate, in order to ensure that the internet remains open and that infrastructure investment is maintained? If not, how should they change?

The Number has no comments.

Question 11: What instances could trigger intervention by national regulatory authorities in setting minimum quality of service requirements on an undertaking or undertakings providing public communications services?

It is crucial that whatever traffic management practices access operators are allowed to carry out, they do not create a "dirt road effect" for the Internet. For example, what percentage of the broadband pipe can be allocated to managed services as opposed to being kept for Internet access? This is not a case for a fixed mathematical equation. For example, proposing a 40%-60% split between managed services and Internet access can have very different meanings depending on the total capacity of the pipe⁸. If a mobile operator offers a user a 1 Mbit/s data connection on their smartphone with a bundle of mobile TV, email and Internet access, but in practice allocates 90% of that bandwidth to mobile TV and only 10% to Internet access, their experience of the Internet on that network will be extremely limited, with probably slow download of websites and the impossibility to use a certain number of applications and services. The mobile network operators will have complied with transparency requirements by telling the user that their bundle included managed services and limited Internet, but his/her consumer experience, although transparent, will be disappointing. This issue is likely to require detailed and evolving guidance (due to technological evolutions) on a case-by-case basis (as not all networks are equal) by regulators, including setting minimum quality of service requirements for Internet access, as is now allowed under the Revised Universal Service Directive.

⁸ In other words, 60% of 1 Mbit/s or of 1 Gbit/s are extremely different realities in terms of the applications and services that can be accessed.

The Number therefore considers that it may be most effective for regulators to set minimum quality of service thresholds ex ante. Art 22 par 3 of the Revised Universal Service 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 “prevent” does seem to suggest that any action undertaken by a regulator should occur prior to a degradation and not after it taking place.

Question 12: How should quality of service requirements be determined, and how could they be monitored?

Compliance with transparency obligations requires that regulators acquire a quite detailed overview of the quality of service offered by all access providers currently, and then receive reports of such quality on a regular basis, to verify if what is advertised by access providers properly reflects reality. Many regulators already conduct regular reviews of broadband speeds which encompass detailed analysis of traffic handling by ISPs and could serve as a basis of such monitoring.

Moreover, transparency also implies that regulators put in place appropriate and effective complaint handling procedures to ensure that both businesses and consumers can get a quick and affordable resolution of any complaint regarding a discrepancy between the services offered by an ISP and its obligations, be they contractual or set by additional guidance by the regulator. In other words, decisions should be reached within a reasonable timeframe — for example 90 days from when a complaint is filed — and without unnecessary burden on the parties, including consumers.

Question 13: In the case where NRAs find it necessary to intervene to impose minimum quality of service requirements, what form should they take, and to what extent should there be co-operation between NRAs to arrive at a common approach?

The Number considers that the form these minimum quality of service requirements should take should be set in a dialogue with all stakeholders. Though a common methodology and metrics could be reached at an EU level, we believe this should not necessarily entail that the minimum required in every Member State on every network should be the same, as the degree of development of infrastructure can be quite different from one Member State to another.

Question 14: What should transparency for consumers consist of? Should the standards currently applied be further improved?

Transparency should be understood as a principle that protects all end-users, i.e. both consumers and businesses.

For end-users to be able to easily compare traffic management policies, two fundamental principles should be in place:

1. A two-layered approach to traffic management policies:
 - a first-layer that gives the plain language “traffic management for consumers” information that can be understood by non-technical users
 - a second layer that is much more detailed in order to allow business users, specialists and application/service/content providers to maximise their products for an efficient use of the network.

2. The possibility for users to compare apples with apples:
 - Traffic management information should be presented in a standardised format, to allow proper comparisons by users.
 - This seems to be the case in Hungary, and is frankly the only option if regulators want to create an effective form of transparency.

Such an approach would benefit from EU wide guidance.

Question 15: Besides the traffic management issues discussed above, are there any other concerns affecting freedom of expression, media pluralism and cultural diversity on the internet? If so, what further measures would be needed to safeguard those values?

The Number has no comments.