



New Voice Services – A Consultation and Interim Guidance

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BT's Response

BT welcomes any comments on its position as laid out in this document, which will be available electronically at <http://www.btplc.com/responses>.

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Executive Summary

Enormous change has taken place in telecommunications in the UK since the introduction of competition in the early 1980s. This trend is set to continue. Not only has the variety of services, both fixed and mobile, provided over network infrastructure increased, but also the growth in service providers has extended the range of services available – both direct replacements for traditional services as well as more feature-rich services.

Ofcom's consultation *New Voice Services – A Consultation and Interim Guidance* recognises the extent of these changes and provides an encouraging approach to enabling the continued development of new types of voice service and competition in their provision. The document recognises that the Internet Age provides consumers with the information to make more-informed choices than ever before.

As Ofcom's Consultation Document recognises, there are pros and cons to a 'hands off' regulatory approach. BT's main drivers in support for this approach are as follows.

- Forbearance allows the market to decide which products and services should succeed and minimises any potential for market distortion through regulation.
- Allowing providers to choose whether or not to provide a PATS-compliant service, and thereby attracting the relevant rights and obligations, enables a potential for a greater variety of services to be offered to consumers.
- The approach encourages investment in the telecommunications industry and promotes innovation in new services to meet consumer demand.

The areas that need to be reviewed to accommodate any issues arising are the following.

- New voice services will create consumer protection issues and it will be the challenge of service providers to inform consumers sufficiently well of these issues that they can continue to exercise well-informed choices.
- The decoupling of the new voice service from the underlying network infrastructure makes it more difficult for service providers to meet existing network integrity requirements, so these will need to be revised.
- New voice services will have considerable implications for 999 calls, creating challenges for both call handling agencies and the emergency authorities receiving 999 calls.
- New voice services illustrate the power of technology to transform markets, introduce greater competition, and render existing SMP regulation inappropriate. Such regulation needs to be withdrawn to stimulate innovation and the competitive process to the benefit of consumers.

On balance, BT supports Ofcom's approach and, subject to the areas identified above being addressed, foresees that the UK telecommunications marketplace will continue to flourish.

Introduction

Ofcom's Consultation introduces some valuable and refreshing ideas to UK telecommunications regulatory policy. These should enable Ofcom to achieve its policy aims of:

- facilitating the successful development of new voice services;
- ensuring consumers are well-informed and adequately protected in relation to using these services; and
- minimising market distortion through regulation.

BT supports Ofcom's approach and these policy aims. Our view of the key elements of this consultation are summarised below, together with BT's response to those specific areas identified.

Achieving Policy Aims Through Forbearance

BT endorses the key policy idea of regulatory forbearance. Ofcom states its preference for allowing the market to decide outcomes as far as possible. This idea is simple but powerful, and demonstrates recognition of several themes in the EU regulatory framework.

Forbearance recognises that when an effective 'upstream' remedy is in place, regulation downstream is unnecessary and inappropriate and may distort market development. It also recognises the power of technology to create a variety of new services that cannot, and should not, be defined and circumscribed by regulation today. Taken together, these features create great dynamism but, with it, equal uncertainty. Therefore, a regulatory policy that is incorrectly introduced creates not only unintended consequences but ones that, by their unforeseen nature, are likely to require further, intrusive, policy intervention. This is neither efficient nor desirable.

Ofcom proposes to forbear from compelling suppliers of new voice services to provide a fully PATS-compliant service and instead allow them the choice to opt-in or opt-out of providing such a service. Where, as with new voice services, the overall value of regulatory intervention is uncertain, this type of policy initiative puts the onus on each provider to assess the commercial costs and benefits of regulatory compliance. Such an assessment by many different suppliers is likely to be better-informed and lead to optimal outcomes. Irrespective of whether a supplier opts-in or opts-out, market development is not distorted, because each supplier would see its choice as the one that gives it greatest commercial advantage.

Well-Informed and Protected Consumers

The idea of the well-informed consumer is highly appropriate in today's communications environment. Competition in the supply of broadband services has given consumers a wide choice of supplier; and today's communications mean consumers have multiple, low cost and easily accessible methods for acquiring the information necessary to make informed selections. These methods include using the

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Internet, using programmes and content in the media, or simply just talking to family, friends or colleagues.

This consultation recognises that a key challenge in this area will be to inform consumers of the implications of using new voice services, and to manage their expectations. By way of example, as new voice services can easily be provided over the Internet by suppliers located outside UK and EU jurisdiction, there may be greater scope for consumer protection issues to arise, such as credit card abuse and weaker data protection of information supplied by customers registering online. Consumers will need to be made aware of these dangers. BT considers this should be achievable and, on balance, is advantageous to consumers, so that Ofcom can continue to forbear from regulatory intervention.

Network Integrity

The Consultation recognises that the technical way in which new voice services are delivered means application of the existing, sometimes stringent, network integrity requirements by suppliers of new voice services is not always possible.

In these circumstances, the new voice services provider cannot offer end-to-end service quality guarantees when it may only be responsible for as little as a third of the value chain. Enforcing existing network integrity requirements in such circumstances would be impractical, unjust and may limit market development. BT would prefer the approach of revising these requirements rather than removing them.

Emergency (112/999) Calls

New voice services have considerable implications for emergency calls. Location information which is either not specific or unavailable will create difficulties for the emergency services. These difficulties will have an adverse impact on both the risks of not locating a caller and on operating costs.

Numbering

We welcome the introduction of the 05 number range for the use of location independent electronic communications services, of which new voice services is a key element. This number range should help stimulate the market and allow companies to develop a wide range of non-geographic services behind a wide range of tariff structures.

However, BT remains concerned about Ofcom's decision to allow geographic numbers to be used for new voice services. Whilst we understand the basis of Ofcom's decision on competition grounds, we believe that Ofcom did not take sufficient account of a number of issues. These include the provision of accurate location information for emergency services; the value placed by consumers on the memorability and reliability of the code as an indicator of the location of the calling party; and the implications of using geographic numbers for number husbandry in the 01 number range.

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Number Portability

Number portability rights will only be available to PATS providers. Whilst having choice to opt-in or opt-out of PATS provision is valuable, BT and other companies will need to know whether customers attempting to port their existing telephone numbers are doing so to and from PATS services. This will be particularly difficult where a supplier chooses to offer both PATS and non-PATS services. These uncertainties imply the need for a public register of new voice services which indicates the PATS status of each service, from each supplier so that suppliers serving a customer with a PATS service can have clarity in each instance of whether they are obliged to export a customer's number.

Impact on Market Definition and Regulation

New voice services clearly illustrate the power of technology to transform markets, introduce greater competition, and render existing SMP regulation for voice calls inappropriate. The technology of mobile telephony has rendered the regulatory obligations on fixed telephony similarly inappropriate. The voice market clearly needs to be looked at as a single entity, within which no supplier has SMP and consumers can use different media to make voice calls.

This contrasts with the existing regulatory approach of 'stove-piping' the voice market. In this view, new voice services are separate from fixed telephony and fixed telephony is separate from mobile telephony. Everything is separate, nothing is a substitute, and everything is a complement. BT believes this static approach results in unwarranted intervention, market distortion and sub-optimal outcomes for all market participants, be they suppliers or consumers.

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Question 1: What types of new voice services do you envisage becoming available in the future and what characteristics will they have that distinguish them from traditional voice services?

The fundamental change that is happening in the provision of voice services is the decoupling of the voice service or 'application' from the underlying network infrastructure. This is a profound change that moves the creation of new voice services into the realm of innovation normally associated with the creation of new web applications.

New voice services can have a very similar look and feel to those voice services provided today over traditional fixed voice networks; or a very different look and feel as they incorporate elements of mobility, multimedia, and messaging that go beyond traditional fixed voice.

New voice services are happening now. For example, Voice over Broadband services using traditional telephones but plugged into any broadband line, multimedia conferencing applications using PC based applications and voice extensions to instant messaging applications.

Most importantly this change bypasses the traditional approach for competitive entry into voice provision, and in so doing creates the commercial environment in which new voice services innovation can thrive. All of the above examples are provided as 'hosted services' over third party broadband IP infrastructures. Companies such as Skype are another example of innovation in new voice services, this time using a 'peer to peer' rather than a 'hosted' model.

BT has launched a number of these new voice services; [Broadband Voice](#) and [Communicator](#) in the consumer sector, [Business Broadband Voice](#) in the small business sector; and both hosted and enterprise based solutions in the corporate/government sector¹.

Question 2: What are the main policy challenges raised by the introduction of new voice services for consumer protection and regulation?

In BT's view, one of the main policy challenges is to ensure consumers are kept informed about new services and products and changing technology while not discouraging innovative developments in the communications sector.

In relation to new voice services the needs of consumers should be promoted through a general awareness of the possibilities and limitations of such services, coupled with education on particular services. Consumers can then make an informed choice over what facilities are important to them and at what price. In this respect, we welcome Ofcom's decision that 056 numbers should not be subject to revenue share, as this will improve consumer decision-making through removal of a potential source of confusion.

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http://www2.bt.com/hiPortal/application?origin=mb_cat_subcat_prod.jsp&event=bea.portal.framework.internal.portlet.event&pageid=mb_pns_catalogue&portletid=mb_pns_catalogue&wfevent=link.SubCategory&com.bea.event.type=linkclick&cl_Desc=link+from+pns+subcats+page&siteArea=mb_corp&ofP=mb_cat_subcat_prod.jsp&ofP=mb_pns_catalogue&cl_Name=mbpns&coJsp=content.jsp&ofP=mb_pns_catalogue&siteArea=mb_corp&productCategory=categories/BT_Corporate_Products_Voice.xml&productSubCategory=categories/bt_corporate_products_voice_voip.xml&PorS=products

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Another policy challenge is the extra-territorial control issues arising from the fact that high capacity, high speed, and low latency Internet connections enable suppliers of new voice services to be based anywhere around the globe. These issues include potential distortion of the market from, for example, VAT differences. Within the UK, for example, BT accounts for the UK rate of VAT at 17.5% on all telecommunication services provided to consumers, but some other competitors account for lower rates of VAT (13% for instance) as they are established in lower VAT regimes.

The diversity of players providing new voice services will create some issues. It is a group ranging from traditional fixed line operators through to software companies and internet service providers who do not have a presence in the UK. Forming any coherent structure to provide a cohesive stance on consumer protection and information will be difficult and require the full co-operation of all interested parties.

It should be noted that the innovative nature of new voice services may in future offer a different option for satisfying elements of the universal service requirements, since the EU regulatory framework envisages the possibility of dividing USO elements between multiple non-SMP suppliers.

Question 3: Do you agree with the initial top level aims identified by Ofcom?

BT agrees with Ofcom that the initial top level policy aims should be as set out in paragraph 4.14 of the consultation document, i.e.:

- to help create an environment in which new technologies can be developed successfully in the market, so that consumers can benefit from a wider and more innovative range of services;
- to ensure that consumers are properly informed and protected in relation to the products they are using; and
- to limit the extent to which regulation creates distortions in the market.

Question 4: Are there other aims and criteria that Ofcom should consider?

Question 5: Are there other key policy questions that Ofcom should be considering?

We believe there are additional aims, criteria and policy questions that Ofcom should consider in order to facilitate the achievement of these top-level aims. These are outlined below in response to Questions 4 and 5.

a) Regulatory Certainty and Predictability

We appreciate that Ofcom's proposals represent an interim position only: the European Commission is expected to clarify its position later this year, and Ofcom plans to issue the Statement following this consultation in early 2005. At the same time, as BT and others have pointed out in responses to the Strategic Review of Telecommunications Phase I consultation, investors require regulatory certainty and predictability if they are to take the risks involved in developing new services.

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b) Support for Infrastructure Investment

BT believes that consumers' interests, and those of the economy as a whole, are best-served by infrastructure competition. Consequently, we also believe Ofcom should ensure that its framework for new voice services avoids any obligations that could deter the construction of new infrastructure, including fibre networks, and promotes any-to-any connectivity between services. BT therefore supports the proposal that line powering should not be required where impractical and suggests that Ofcom should state explicitly that line powering will not be required where services are delivered via local access fibre.

c) Consumer Information

Section 7 of the Consultation, 'Protecting consumers,' refers to the need for service providers (whether via self-regulation, co-regulation or formal regulation) to make available to consumers information on the new voice services they offer. We believe consumers will also need information allowing them to compare and make choices between new services, and between new and traditional services, offered by different service providers. As stated in our response to the Strategic Review Phase I document², BT's view is that independent third party websites are the best vehicle for providing comparative information to consumers. We urge Ofcom to consider following this approach, including the role of its Price Assurance Standard ("PASS") accreditation scheme for third party websites, in the context of new voice services.

d) Consumer Protection

BT is very concerned about the level of mis-selling of existing Carrier Pre-Selection and Wholesale Line Rental-based voice services. We believe that increasing availability of new voice services could increase instances of mis-selling. We therefore urge Ofcom to consider not only the issue of consumer information in relation to new voice services, but also to adopt an approach to consumer protection based on quick and effective action against mis-selling.

e) Market Information and Market Reviews

BT has highlighted the role that new voice services such as Voice over Broadband will play in widening the boundaries of the voice market, thereby reducing the market power of providers of traditional voice services. BT considers it essential that Ofcom monitor the take-up of new voice services on a regular basis so that the competitive effects on the overall voice market are understood and that relevant information is available for use in future Market Reviews.

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<http://www.btplc.com/Thegroup/Regulatoryinformation/Consultativeresponses/Ofcom/2004/Investmentandinnovation/response.pdf>

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f) Enforcement of Regulatory Obligations

Under Ofcom's proposals, the provider of a new voice service would be able to make a choice as to whether or not the service was to be classified, and therefore regulated, as PATS. In our view, if these proposals were accepted, transparency on such choices would be essential so that Ofcom and other providers had clarity on the rights and obligations applying in each case. For example, without this information, competitors would be unable to establish whether they were obliged to export numbers across to a particular new voice service of a new provider. This implies the need for a public register of new voice services, which indicates the PATS status of each service.

g) Implications for Law Enforcement Agencies

In liaison with the relevant stakeholders, Ofcom should ensure that the implications of new voice services for law enforcement agencies are properly addressed. This should include consideration of the issues which may arise where a service provider is based overseas and falls outside the jurisdiction of UK agencies.

h) Emergency Services

Close co-operation will be required to tackle the technical challenges for call handling agencies and emergency authorities posed by VoIP originated calls. BT believes Ofcom is best placed to initiate and manage the discussions necessary to provide maximum consumer protection.

i) The EU and International Dimensions

The approach that Ofcom adopts must take account of the UK's competitive position and of the principle of EU harmonisation. Regulation in the UK should not disadvantage UK consumers and businesses by stifling the development of innovative services which could, in contrast, flourish in other developed economies. Close co-operation with the Commission and other NRAs will be needed to ensure consistency of regulatory application.

Question 6: Do you agree with Ofcom's initial view that it is not necessary for all voice services to provide the same standard features as traditional telephone services, and that we should instead focus on enabling consumers to make informed decisions?

BT agrees with Ofcom's initial view. This approach should encourage the development of new services in the UK and give consumers the confidence to experiment with such services.

Question 7: Do you agree with Ofcom's initial view that it is not desirable to draw a distinction between the regulation of services that look like traditional services and those that do not?

We agree with Ofcom that it is not desirable to draw distinctions between new voice services that look like traditional telephony and those that do not for the purpose of

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regulation. In BT's view, Ofcom should adopt a forbearance policy with regard to new voice services, whilst reducing the regulation of traditional services to reflect substitution with mobile services and new voice services.

There are at least three reasons why drawing a distinction would be undesirable.

First, the term 'traditional' implies a fixed set of characteristics, which does not accord with the economic reality of progressive and increasing competition in voice calls. Regulation should not try to 'anchor' markets around a fixed feature set, but rather should allow the dynamic preferences of well-informed consumers to express themselves in driving differentiation, reflected by the success and failure of suppliers to satisfy consumers' changing demands.

Second, almost as many households use mobiles (circa 85%) as use fixed phones (92%)³, blurring distinctions between traditional and other services. Further, to remain attractive to customers, traditional network operators are responding by continually innovating, expanding the range of services they offer to include features such as SMS messaging, voicemail and e-mail. Competition between fixed and mobile operators is forcing convergence in terms of services, creating a single UK market for voice calls, within which no operator has SMP.

Third, asymmetric regulatory treatment of different new voice services would create incentives for some suppliers to design their services with characteristics that enable them to bypass regulation. This highlights a more fundamental problem. Regulatory initiatives that impose net costs on suppliers but are nevertheless mandated may initially result in regulatory bypass and subsequently result in market distortion. This is a powerful argument in favour of forbearance from drawing distinctions between different types of new voice services.

Question 8: Do you agree with Ofcom's initial view that a distinction should not be drawn between the regulation of 'second line' services and 'primary' services?

We agree with Ofcom that distinctions should not be drawn between regulation of primary and secondary line telephony services. However, we believe Ofcom already makes such a distinction between fixed and mobile phones, because it sees one as a *complement* for the other.

In contrast, BT maintains that the two are *substitutes*, both being used as primary line or secondary line alternatives within a single voice calls market in which no supplier has SMP. Today, relative growth rates have pushed mobile voice call minutes to circa 28 per cent of total voice call minutes, compared to 4 per cent in 1997. There are now more mobiles than fixed lines and, whilst some households have multiple fixed lines, many more have multiple mobiles.

New voice services will increase the substitutes available to consumers for their telephony services. Consumers will decide how they want to adopt these services, both initially and in the longer term as they become accustomed to their strengths and

³ http://www.ofcom.org.uk/research/industry_market_research/m_i_index/cm/cmpdf/?a=87101

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weaknesses. Given the uncertainty over how they will be used, the most sensible current policy is one of regulatory forbearance.

Question 9: Do you think that a threshold should be set at which new voice services should be required to offer the same features as traditional voice services? If so, how should the threshold be set?

BT believes that the setting of thresholds for increased regulation of new voice services in the future would not only result in providers exiting the market when the threshold was in sight, but would deter many providers from supplying such services in the first place.

We do not consider that thresholds of the type envisaged in this question (based on the number of subscribers or the level of revenues) would be workable in relation to new voice services. This is because the reasons for the differences between the features of new and traditional voice services are essentially technical, and the extent to which it may be possible to remove them in the future is generally unrelated to growth in take-up or revenue.

On the other hand, for other services, BT believes that setting triggers for regulatory change or deregulation may be appropriate. We believe that pre-determined triggers offer the possibility of reconciling the need for stability, which is essential for an investment-friendly climate, with the adaptability that needs to be a feature of regulation in a dynamic industry. Under such a framework, stakeholders are aware that regulation may change, but they know in advance which changes will be made in which clearly-defined circumstances.

Q10 – Do you agree that most providers would want to offer at least a basic form of access to 999?

Access to emergency services is an important feature in the provision of telephony services. BT agrees that most service providers offering calls to or from numbers in the National Telephone Numbering Plan would want to offer at least a basic form of access to 999 (including the European emergency number of 112).

There is however likely to be a significant set-up cost associated with providing such access and some smaller providers may find such costs too great.

Q11 – Do you agree with Ofcom's initial view that consumers sufficiently value having access to 999 in order for them to wish to retain at least one means of "high quality" (very reliable) access to 999 at home?

The cost of 999 is currently invisible to consumers in the UK. It is unlikely that the majority of consumers currently give access to 999 services a high priority when deciding on a telephone service, as they do not see a direct cost. BT believes informed consumers are likely to wish to retain at least one fixed or mobile means of reliable high quality 999 access, but this should be tested through consumer research.

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Q12 – Do you agree with Ofcom's initial view that not all voice services should be required to offer access to 999 but that decisions about subscribing to and using such services must be properly informed?

BT agrees that not all voice services should be required to offer access to 999, subject to clear information being supplied on the limitations of the service. Such limitations need to be made clear to consumers and to Call Handling Agencies and Emergency Authorities so that all know what to expect.

There needs to be a method to pay for the handling of 999 calls generated by customers. Agreements will need to be in place to enable this, both contractually and technically, for example using a PSTN gateway interconnection via a 3rd party.

Q13 – Do you agree with Ofcom's initial view that, given some new services may not be able to offer the same degree of reliability for emergency calls as traditional voice services, it is better that these services are able to provide less reliable access to 999 rather than preventing them from offering any access at all?

BT supports Ofcom's view that it is better to allow service providers to offer less reliable access to 999 if the alternative is no access at all.

Reliability will be reduced in the numerous instances where a new voice service provider has no relationship with or control over the facilities of the underlying network provider(s). Real time automatic location identification is not currently possible, and for nomadic users may never be. Power to supply customer premises equipment used with the new voice service cannot be guaranteed.

In these circumstances, industry should be encouraged to continue development of systems to facilitate reliability for key applications such as emergency calls by all users of IP networks. To this end, voluntary self-certification schemes that follow recommended guidelines are preferable to mandated regulatory solutions. Ofcom has an important role in organising industry groups in the UK and in stimulating standards bodies such as ETSI or IETF to accelerate their work in these areas.

Question 14: Do you agree with Ofcom's assessment of the costs and incentives for providers offering PATS?

Ofcom's assessment of the costs and benefits of PATS is a purely qualitative view that is not supported by any quantitative data. We believe there is not a 'correct' answer to this question. For some suppliers, there may be a net cost to offering a fully PATS-compliant service – that is, the costs of providing the four core elements of PATS service and complying with additional PATS conditions outweigh any benefits. For others, there may be a net benefit.

The biggest benefit to suppliers of providing a fully PATS-compliant service is number portability. If this facilitates customer switching, it reduces sales and marketing costs, and increases the profitability of suppliers. With circa 92% of households having a PATS-compliant fixed line phone service, the gain to suppliers from number portability is *potentially* very large.

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That said, according to Oftel⁴, after five years of portability the proportion of residential fixed telephony users who had ever ported their number was only 12%. As future benefits have a lower present value, it becomes doubtful whether a portability figure of this level after five years produces sufficient benefits to offset the immediate costs of setting up portability processes and offering a fully PATS-compliant service. Moreover, whilst each supplier only has a *share* in the overall *future* benefits of number portability in line with its net success in attracting porting customers, it must bear the *full* and *immediate* cost of its own PATS compliance.

Q15 – Do you agree with Ofcom's understanding of the implications of the definition of PATS contained in the Directives?

BT believes that just because a PATS service is one which has four key characteristics (being publicly available, for making and receiving calls, for making emergency calls, and using numbers from a numbering plan), it should not automatically follow that a service with these characteristics has to be treated as PATS.

There should be a category of publicly available electronic communications service that has the four PATS characteristics but does not attract PATS for the purpose of regulation.

Q16 – Do you agree with Ofcom's understanding of the implications of this alternative approach?

Ofcom mention that the Commission's current thinking is that providers should be allowed to choose whether or not they are providing PATS even if they offer the four "core" elements of PATS. This 'alternative approach' is consistent with BT's view (and is foreshadowed in the Commission's own consultation document where it talks about non-PATS providers being required to offer emergency calls). However BT is cautious about introducing a new category of PATS with lower resilience and quality standards but which attracts the full range of benefits associated with PATS. This issue needs a broad consultation with industry to establish what level of lowered quality obligation is reasonable - see our response to Question 20 regarding a revision to the network integrity guidelines.

BT agrees with Ofcom that the alternative approach would not act as a disincentive to offering some form of access to 999.

Question 17: Are there policy initiatives in other areas related to new voice services that Ofcom should be considering?

Please see our answers to Questions 3, 4 and 5 above.

⁴ See para 4.18 in *Consumers' use of fixed telecoms services*. OFTEL, July 2002. Also, in its first year of introduction in the UK, only 1.5 per cent of mobile users ported their number, and the figure was even lower in the Netherlands at 0.5 per cent (Fairfax Digital Financial Review, Sept 19)

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Question 18: Although Ofcom is not consulting on its interim position, it would welcome your views on its interim policy to forbear from enforcing PATS obligations against new voice services which offer access to 999.

BT believes the appropriate policy response to the manifest competition to supply voice services should be for Ofcom to forbear from regulating new services and to rapidly deregulate traditional services.

Forbearance removes the burden of regulation from suppliers and recognises that, in a society with advanced communications, there are many different ways in which consumers can empower themselves with the information necessary to make well-informed judgements of the relative merits of different services. Among these would be the Internet, the media and simple word of mouth between family, friends and work colleagues. However, in even the most well-informed markets the basic element of *caveat emptor* – or buyer beware – is always present to some degree, so that buying is subject to some risk.

Forbearance reduces the costs of entry and compliance, encourages choice and competition and, therefore, used in a well-informed market, will facilitate the creation of outcomes market participants really value. These benefits make forbearance even more useful as a permanent policy than as an interim policy.

Clearly, if number portability really is a commercially valuable feature, many suppliers will opt to offer a fully PATS-compliant service in order to acquire it⁵. Hence, BT is in full agreement with the policy of allowing suppliers of new voice services to opt-in or opt-out of full PATS provision. This is preferable to being compelled to opt-in, when those suppliers for whom full PATS is a net cost may end up distorting market development by creating methods of regulatory bypass.

Question 19: Is it reasonable to have different network integrity requirements for nomadic services compared to services at a fixed location, and how should consumers be made aware of this difference?

BT agrees that it is reasonable to have different network integrity requirements for nomadic services compared to services at a fixed location.

Network integrity requirements, which have historically applied to PSTN based services, are less applicable in an IP world where voice is decoupled from the underlying access network and may be transported over the public Internet. In an IP world, there are up to three layers to new voice services delivered to customers - access, internet service provider, and voice service provider - each of which could be supplied by different companies. In this situation, it would be both unreasonable and impractical to expect the service provider to offer guarantees of reliability across layers of the end-to-end service over which it has no control. Examples of such layers include the public Internet, wireless access provided by a 3rd party, and access provided from overseas.

⁵ A public register indicating the PATS status of each service will probably be required to enforce regulatory obligations. See 5 (f).

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Consumers should ideally be made aware of this issue at the point of sale rather than at the point of use. Typically, new voice services will require the customer to register, often through a website. This point of sale is the best place to ensure anyone who wants to use these services is fully informed about any variations from a traditional telephony service. In contrast, alternatives to the new voice services may not be available if the information is supplied only at the point of use.

A more general awareness programme could also be useful. This leads to questions about who would fund such a campaign and also the amount of information to be provided.

Question 20: Do you think that it is better for Ofcom to:

- 1. Retain the Essential Requirements Guidelines in their current form;*
- 2. Re-issue the Essential Requirements Guidelines, incorporating additional guidance in relation to Voice over Broadband and Next Generation Networks; or*
- 3. Withdraw the Essential Requirements Guidelines, and apply the 'reasonably practical' test set out in General Condition 3*

The Essential Requirements Guidelines apply to PSTN network infrastructure and have as their purpose to produce a benchmark or standard across the telecoms industry. Retaining them in their current form for new voice services would be neither practical nor sensible.

The new services will require a new range of restoration and resilience strategies, and as they emerge benchmarks and standards can be produced. Ofcom, through industry consultation, should adopt Option 2 above, and re-issue the Guidelines to assist providers in supplying new voice services. This should help them meet the Conditions of Entitlement.

Question 21: Do you think that there are reasonably practical measures that providers at a fixed location can take even if they do not directly control the underlying network?

BT does not believe there are reasonably practical measures that providers at a fixed location can take.

Up to three different layers - access, Internet service provider, and voice service provider - may be involved in delivery of new voice services. There could be hundreds of different new voice suppliers, operating from different parts of the world. These will offer services over the broadband connections provided by hundreds of different ISPs, who will be unaware of the precise content of the packets being transmitted through these connections. Finally, ISPs will need to use fixed or wireless local access to deliver services to customers but LLU will increasingly put control of fixed local access into the hands of many different providers.

This complexity of possibilities in the delivery of new voice services makes even reasonably practical measures very challenging to actually introduce.

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Question 22: What in practice should the roles of the network provider versus the service provider be for network integrity when the network provider has no control over the services offered over their network?

The network provider must define its network products in a way that is independent of the services that might run over its networks. The definition needs to include performance parameters, such as availability and reliability.

The service providers are responsible for understanding the implications of the network provider's products and performance on their services. Service providers need to ensure that their customers are fully aware of the limitations of the service they are opting for, and that it may be less reliable, and in some cases not offer facilities, that were historically available on a conventional telephone line.

Question 23: Do you agree that it is likely to be reasonably practical for analogue telephone and ISDN2 services to provide line powering but not other services?

BT supports Ofcom's position that the provision of line powering should not be mandated where it is not reasonably practical.

Regulation should be technology neutral and, accordingly, if a line powering requirement is removed from voice services provided by one technology (e.g. Voice over Broadband), it should also be removed from PSTN and ISDN2. This will maintain technology neutrality and remove the obstacles to using new technology to provide new voice services in the future, for example through fibre.

This would make line powering another of the service differentiating features of the voice service product being offered and consumers could make an informed choice on whether this feature is important to them.

Question 24: What are your views on the technical feasibility of providing location information for nomadic services, both now and in the future?

Whilst it is desirable for new voice services to provide location information, technical and commercial constraints mean this outcome cannot be quickly achieved and may never be fully realised.

Positively and automatically identifying the precise location of devices plugged into an IP network is difficult and potentially impossible. Instances include where devices are behind firewalls and/or where Network Address Translation is used; and where different organisations are responsible for the physical, IP access and application layers involved in the provision of new voice services.

No comprehensive and practical real-time method of collecting location information exists today in either standard or proprietary models, and it is far from clear that any method will be commercially viable at any time in the future.

In the short term, new voice services may need to be treated like the early cellular services, with an acceptance that coverage is limited and that location information will not automatically be available to the emergency services.

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In the longer term, there may be scope to pass location information between the different layers of the communication chain, or perhaps integrating within the terminal device triangulation technology.

Question 25: What approach for emergency location would take account of current technical limitations, whilst ensuring that technical advances bring benefits to emergency organisations in the long run?

Incomplete or erroneous location information places additional costs and risks on agencies handling emergency calls.

Whilst VoIP originated calls do provide some location information, this information may be unreliable, particularly where the caller is not using the service at their registered address. Consumers should be made aware of this limitation of the location information automatically provided to emergency services when making VoIP calls from nomadic locations. They should be encouraged to always update their registered address when using new voice services nomadically.

Verifying the location of the calling party is clearly a priority for handling VoIP-originated emergency calls. This will require extending the existing emergency call handling procedures to incorporate new voice service providers offering any sort of 999 service. Ofcom is well positioned to play an important role in:

- Facilitating discussion to tackle the location issues; and
- Exploring possible future emergency services using, for example, real time text, picture or video information.

Ofcom has an important role in organising industry groups in the UK and in stimulating standards bodies such as ETSI or IETF to accelerate their work in these areas.

Question 26: Do you agree that consumer information is required where services look and feel like a traditional telephone service but not where services are clearly different (e.g. PC based services)?

BT does not agree that consumer information is required only where services look and feel like a traditional telephone service but not where services are clearly different. Information should be made available for all new voice services.

Identifying services that look like traditional PSTN is not always within the control of the service provider, who cannot control what equipment a customer puts on the end of that service. While some services are designed to have standard handsets plug into them for ease of use, equally a non-standard piece of equipment could be used, or a phone handset plugged into a PC socket to use voice over an Internet or broadband connection.

A general industry campaign to promote and advise on the features of new voice services would be beneficial and this should cover all new voice services.

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Question 27: Do you agree with a two stage approach to consumer information, first to ensure the purchaser is aware of the nature of the service at the point of purchase, and second to ensure all potential users are aware the service does not provide access to 999 at the point of use?

BT fully supports the need to ensure consumers are making informed decisions about different new voice services. BT believes the two stage approach proposed by Ofcom is sensible and a good starting point. However, the actual detail of how to raise consumer awareness may be more difficult in practice.

Providing information to the subscriber of the service should be reasonably straightforward. There will be opportunities during any marketing campaign, at any point of sale or registration, and during any verification or confirmation process. If the service could be perceived as standard telephony but it has limitations or differences from standard PSTN then those should be made clear to the customer at these times. Limitations or differences from traditional services should be clear and unambiguous and not hidden away in small print. Encouraging providers to list these limitations will not be easy, but is vital to ensure customers make an informed choice.

As we indicate above in response to Questions 4 and 5, point c), a comparative website will be the best means to inform consumers of the limitations and benefits of the various services and how they differ from standard PSTN. Any comparative website would be best managed and run by a third party so that independent and unbiased information is collected and presented, and we urge Ofcom to consider this approach.

Mis-selling on other areas of the telecoms industry and in the utility sectors has had a negative impact on the integrity of providers. In order to ensure that a repeat situation does not occur, industry needs to agree and adhere to a code of practice on the selling of these services. This could be linked to guidance on what information should be provided to customers of new voice services.

Making users more aware of the limitations and uses of new voice services could be more problematic. The idea of putting stickers on handsets has been suggested, and may be useful in some circumstances, but the handset is rarely part of the service and although equipment may be sent out, it would be at the customer's discretion whether they put the stickers on the handset being used with the new voice services. Subscribers to the service need to take some responsibility to manage expectations regarding the reliability and functionality of the new voice services within their own households.

The brochures that accompany cordless telephones raise awareness that they require a power source and that there should be a back up phone if the power fails. For example, the [BT Diverse](#) range of digital cordless handsets warns that *"This equipment is not designed for making emergency telephone calls when the power fails. Alternative arrangements should be made for access to emergency services."* This has raised awareness but does not seem to have stopped people from using these handsets and so consumers have made an informed choice. It may be possible to offer on-screen alerts on device screens to indicate if 999 access is not available.

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Another suggestion in the consultation is a recorded message. BT believes this could be perceived as a barrier by industry as it adds cost and would require routing to a platform which needs to be developed and maintained. It is also questionable as to whether this could waste time in a real emergency situation.

Question 28: If consumer information is required to ensure that consumer interests are protected, which of the above frameworks regulatory framework, if any, is appropriate to ensure it is successful?

We share Ofcom's view that in order to work effectively any approach will require the participation of the majority of industry.

The innovative nature of new voice services means there are a range of providers with differing levels of network access and customer bases. The risk is that the burden of consumer protection may fall on some key players, while companies only interested in revenue may not comply with regulatory measures. Therefore, BT would support a co-regulatory framework that gives Ofcom some powers of enforcement.

We would suggest that such enforcement could be achieved through the introduction of a specific General Condition to deal with the provision of consumer information in this area.