



Review of Relay Services

Further consultation

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Section 1

Summary

- 1.1 Communications services are important to all citizens. However, people with disabilities can face barriers when using communications services. Although the growth in the availability and use of broadband and mobile data services, particularly email and mobile text messaging, has helped disabled end users to communicate, the ability to make and receive telephone calls remains crucially important in today's society. Users with hearing and/or speech impairments, in particular, can face barriers when accessing voice telephony.
- 1.2 The importance of access to voice telephony, and the barriers that disabled end users face is recognised at a European level by the Universal Service Directive, which requires EU Member States to take action to secure access to, and affordability of, voice telephony services for end users with disabilities.
- 1.3 In the UK, the regulatory regime requires fixed and mobile communication providers to provide access for their customers to a text relay service. The text relay service allows hearing and/or speech-impaired end users to communicate with others on the telephone through a relay assistant, who acts as an intermediary by converting speech to text and text to voice in order to facilitate the call.
- 1.4 Under the present rules, Universal Service Condition 4 requires BT to fund a text relay service approved by Ofcom for all end users who need to use textphones because of their disabilities, whether customers of BT or any other communications provider. General Condition 15.3 requires all communications providers, including BT, to provide access to text relay for their customers.
- 1.5 In July 2011 we consulted on changes to the regulatory regime to introduce improvements to the current text relay service, which we called Next Generation Text Relay (NGTR). Our proposal was that NGTR would provide users with the ability to interrupt conversations, have two-way speech and the ability to benefit from the use of mainstream equipment. As with the current rules, our proposal was that all fixed and mobile communications providers should provide access for their customers to an NGTR service approved by Ofcom. We proposed that the new requirement would be imposed on all communication providers through a modification to GC15 and that provision of relay services would no longer be a requirement of Universal Service Conditions on BT alone.
- 1.6 The responses to the 2011 Consultation relating to our NGTR proposals raised a number of important and complex issues, to which we have given careful consideration. In the light of those responses, relevant parts of which, for the purposes of this further consultation document, are set out in more detail in this document, we have decided it is necessary to conduct a further consultation on two areas of our proposals:
 - Our assessment of the costs to industry and the benefits to disabled end users of implementing our proposals for NGTR, particularly as regards access by mobile providers; and
 - The criteria and process by which Ofcom proposes to approve a relay service pursuant to the proposed GC15.5, including the Key Performance Indicators Ofcom considers are appropriate.

- 1.7 This document sets out, as part of this further consultation, the further technical and costing information that we have commissioned from external consultants, InterConnect Communications (ICC), to support our assessment, together with our views on the implications of the consultation responses for our proposals.
- 1.8 This information indicates that the additional costs for other communication providers (who are already providing access to the current text relay service) of connecting with an NGTR service provided by BT, or a third party provider, will not be large. BT has confirmed to Ofcom that, if the proposals for NGTR are implemented through a General Condition, it intends to develop an NGTR service and provide a wholesale access service for other communications providers to this service. If it were necessary for other communication providers to set up an NGTR service independently from BT, the information provided by ICC suggests that they would face similar set up costs to those identified for BT.
- 1.9 Looking at the benefits of maintaining the requirement for all fixed and mobile communications providers to provide access to a relay service in the light of our NGTR proposals, we set out our view that it is appropriate that disabled users have the choice of communications provider, both fixed and mobile, available to the majority of end users and are not limited to voice telephony services from BT (or from fixed-line communications providers). This will allow disabled consumers to benefit from the competitive and dynamic communications market present in the UK, including the benefits of mobile voice telephony.
- 1.10 This document is therefore an important part of our assessment of why we propose that it is appropriate for access to NGTR services to be provided by all fixed and mobile communications providers. In this regard we have considered further the relevant costs of our proposals for industry and balanced those costs against the importance we place on the benefits to disabled end users of having the ability to access fixed and mobile voice calls and, moreover, the benefits to disabled end users arising from the choice of communication providers. On this basis, we are consulting further on our proposal that it is appropriate to proceed with NGTR and that these proposals are a proportionate means of securing the objectives of the Universal Service Directive. We would welcome stakeholders' views together with any further evidence on these aspects of our proposals.
- 1.11 In addition, this document sets out for consultation the criteria by which Ofcom proposes to approve bodies offering NGTR services, including the Key Performance Indicators we would expect a relay service to be capable of meeting on an ongoing basis. In the light of the proposed 18 month implementation period for NGTR, we have also set out a timeline for further engagement between Ofcom and industry and would welcome stakeholders' views.
- 1.12 In respect of both matters they cover, our proposals in this document are based on what we said in the 2011 Consultation. So, for example, our proposed approval criteria are those which would apply were we to adopt our proposals for NGTR (which we are still considering in light of the responses to the 2011 Consultation).
- 1.13 We invite responses to this consultation to reach us by 13 July 2012. We anticipate issuing a final statement on NGTR later this year once we have considered those responses. The statement will summarise responses to this consultation and the 2011 Consultation responses not already summarised in this consultation document.
- 1.14 This document includes a summary of responses relating to the video relay aspects of the 2011 Consultation but does not contain proposals on video relay. Ofcom plans

a consultation on video relay later this year. In the meantime Ofcom is working with government and disability stakeholders on DCMS' initiative to encourage the provision of video relay services by communications providers and businesses.

Section 2

Introduction

Aim of this document

- 2.1 This document follows our consultation on the Review of Relay Services published on 28 July 2011 (the “2011 Consultation”). In the 2011 Consultation we consulted on changes to the current provision and implementation of relay services in the UK in order to ensure equivalence of access to communications services for those with hearing and/or speech impairments.
- 2.2 The 2011 Consultation closed on 20 October 2011 with a total of 81 responses received: 13 from disability stakeholders, 16 from communication providers (“CPs”) and relay providers¹, and 52 from individuals (including responses received via VRS Today). Non-confidential responses can be found on our website². We have considered these consultation responses carefully and have undertaken further technical and costing work, which is described in detail in this further consultation.
- 2.3 The consultation responses relating to our NGTR proposals raised a number of important and complex issues for Ofcom to consider. In the light of the responses received, and given the importance we place on ensuring that a workable solution for relay services is implemented as soon as is practicable, we have decided that it is necessary to conduct a further consultation on two areas of our proposals, as follows:
- Our assessment of the costs to industry and the benefits to end users of implementing our proposals for NGTR, particularly as regards access by mobile providers; and
 - The criteria and process by which Ofcom proposes to approve a relay service pursuant to the proposed GC15.5, including the Key Performance Indicators (“KPIs”) Ofcom considers are appropriate.
- 2.4 In Section 3 we summarise the consultation responses relevant to our assessment of the costs and benefits of our NGTR proposals and provide responses. In light of stakeholder responses to the 2011 Consultation in relation to the costs of NGTR and the proposal that all CPs should provide access to NGTR we are consulting on our further views of:
- the incremental costs of establishing a relay service for BT and/or for a third party provider;
 - the removal of USC4 on BT;
 - the incremental costs for other CPs of interconnecting with the relay service; and
 - the importance and appropriateness of the requirement to provide access to a relay service remaining applicable to all CPs and on our additional analysis of the costs and benefits for NGTR to support our proposals to require all fixed and mobile CPs to provide access to NGTR.

¹ The term “relay providers” includes providers of relay services and providers of software or technical infrastructure for relay services.

² <http://stakeholders.ofcom.org.uk/consultations/review-relay-services/?showResponses=true>

- 2.5 In Section 4 we set out our proposals for the approval criteria, including KPIs, to be applied by Ofcom when considering the approval of NGTR services. We are consulting on these proposals.
- 2.6 We will consider the responses to the 2011 Consultation together with any responses to this consultation in reaching a decision on the future regulation of relay services. We anticipate issuing a final statement on NGTR later this year once we have considered those responses.

The importance of communications services

- 2.7 Communications services are important for all citizens. They provide people with access to cultural and educational activities and resources, and to services and commerce. They make it easier to participate in civil society, to learn and develop new skills, to connect with family, friends and community, as well as to search for work. They also allow businesses to engage with a wider range of customers and suppliers.³

The changing communications landscape

- 2.8 The way that many consumers engage with technology has changed dramatically and in a relatively short time frame. Communication services have proliferated, offering new ways to communicate. We have seen a rapid transition from UK households only having access to a basic landline with limited mobile and internet use to a position where 94% of households have mobile telephones (compared to 84% having a landline) where 78% have internet access.⁴ Such services allow consumers increased choice in how to communicate e.g. via email, instant messenger, text as well as voice calls.
- 2.9 Whilst the growth in the availability and use of broadband and mobile data services, particularly email and mobile text messaging services, has helped those with hearing and/or speech impairments to communicate, voice communication – i.e. the ability to make and receive a telephone call - remains crucially important, and the inability to access voice communications can be a barrier for these end users. The importance of access to voice communications is recognised at a European level by the Universal Service Directive, which requires EU Member States to take action to secure access for disabled end users to telephone services (see below). In a number of countries, governments and regulators have intervened to address this barrier by mandating the availability of relay services. These services enable users with hearing and/or speech impairments to make and receive voice calls using third party relay assistants. In the UK, Ofcom has intervened to ensure that a text relay service is provided by fixed and mobile CPs to their customers.

The legal framework

- 2.10 The legal framework in which Ofcom is conducting its review of relay services was set out in full in Annex 5 of the 2011 Consultation and reference should be made to that document for a more detailed explanation of the legal framework. In summary, the legal framework consists of the amended Universal Service Directive (the

³ This was also highlighted in our Access and Inclusion statement in 2009, page 10: http://stakeholders.ofcom.org.uk/binaries/consultations/access/summary/access_inc.pdf

⁴ Ofcom Consumer Experience Report, 2011, page 18 and 29.

“Directive”⁵, provisions of the Communications Act 2003 (the “Act”) and the Universal Service Order⁶ (the “Order”), as implemented by Ofcom.

- 2.11 In particular, Article 7(1) of the Directive requires Member States to take specific measures to ensure that access to, and affordability of a fixed publicly available telephone service (“PATS” includes voice telephony services but not broadband)⁷ for disabled end users is equivalent to the level enjoyed by other end users. This requirement applies unless measures are taken pursuant to Article 23a of the Directive.
- 2.12 Article 23a of the Directive, which was added to the Directive in the most recent revisions to the European framework, obliges Member States to empower national regulatory authorities such as Ofcom to specify, where appropriate, requirements to be met by undertakings providing publicly available electronic communications services (“PECS” includes voice and broadband)⁸ to ensure that disabled end users have access to services of those undertakings equivalent to that enjoyed by the majority of end users; and benefit from the choice of undertakings and services available to the majority of end users.
- 2.13 In effect, Article 7 of the Directive requires Member States to impose specific measures, such as legislation or Universal Service Conditions (“USCs”) on designated service providers to secure the provision of equivalent access and affordability to a fixed PATS service, unless those requirements are imposed by way of General Condition (“GC”) under Article 23a of the Directive. Additionally, Article 23a means that Member States must empower their national regulatory authority to impose GCs on any undertakings providing PECS for these purposes. This means, where the regulator (in this case Ofcom) determines it is appropriate, GCs relating to equivalence of access and choice for disabled end users can be imposed on a wide range of CPs extending beyond the designated Universal Service Provider(s).
- 2.14 These provisions have been transposed in the UK under the Act (as amended) and the Order. Consistent with the Directive, the Order requires Ofcom to secure the provision of a text relay service through the imposition of USCs unless a GC has achieved the same effect. Article 3A of the Order provides that where Ofcom makes such a general condition, it shall not impose a universal service obligation in respect of those matters.
- 2.15 Section 51(1)(a) of the Act provides that Ofcom can set GCs considered appropriate for protecting the interests of end users of PECS. Section 51(2)(c) of the Act states that this includes a power to set conditions for that purpose in relation to the provision of services to disabled end users. In this connection, section 3(4)(i) of the Act provides that in performing its statutory duties, Ofcom is required to have regard to the needs of persons with disabilities, the elderly and those on low incomes.

⁵ Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services, as amended by Directive 2009/136/EC

⁶ SI 2003/1904 The Electronic Communications (Universal Service) Order 2003 (as amended by SI 2011/1209).

⁷ A service made available to the public for originating and receiving, directly or indirectly, national or national and international calls through a number or numbers in a national or international telephone numbering plan.

⁸ Any service consisting in, or having as its principal feature, the conveyance by means of an Electronic Communications Network of signals, except in so far as it is a content service, and which is provided so as to be available for use by members of the public.

- 2.16 Ofcom is required by section 47(2) of the Act, when modifying a GC to ensure that it is not unduly discriminatory in relation to particular persons, proportionate to the aim sought to be achieved and transparent.
- 2.17 Pursuant to those domestic and EU law provisions, Ofcom has until now imposed a combination of USCs and GCs to mandate the provision of a text relay service. Under the current rules, all providers of fixed and mobile PATS are required by GC15.3 to ensure that their hearing and/or speech impaired subscribers are able to access an approved relay service. Under USC4, BT is required to fund a text relay service approved by Ofcom for all end users of PATS who need to use textphones because of their disabilities, whether end users of BT or of any other CP. In providing access to other communications providers, BT is obliged to provide access on fair, reasonable and non-discriminatory terms, including cost-orientated charges.
- 2.18 BT currently provides the only approved text relay service. To date, no other operator has sought approval from Ofcom for a text relay service.

The objective of the review

- 2.19 As set out in the 2011 Consultation, our review seeks to assess whether the current arrangements for the provision of relay services provide equivalence of access to voice telephony for end users with hearing and/or speech impairments. In this regard, in the 2011 Consultation we put forward a number of criteria that we would use to inform our proposals for the measures necessary to secure the required equivalence based on research indicating some common factors that people with hearing and/or speech impairments consider important when using communications services. In the light of our legal powers and duties, we looked at what improvements and changes might be made to existing services, taking into account changes in mainstream technology and the proportionality of any intervention by Ofcom.
- 2.20 We drew upon a variety of inputs and information sources to help assist us with the review including commissioning research and technical reports, holding meetings and requesting information from consumer, disability, and industry stakeholders as well as providers of relay services in and outside the UK. We also considered the practices of our international counterparts.
- 2.21 A full description of the details of the inputs to the review and our proposals are contained in the 2011 Consultation, and reference should be made to that document for further background.

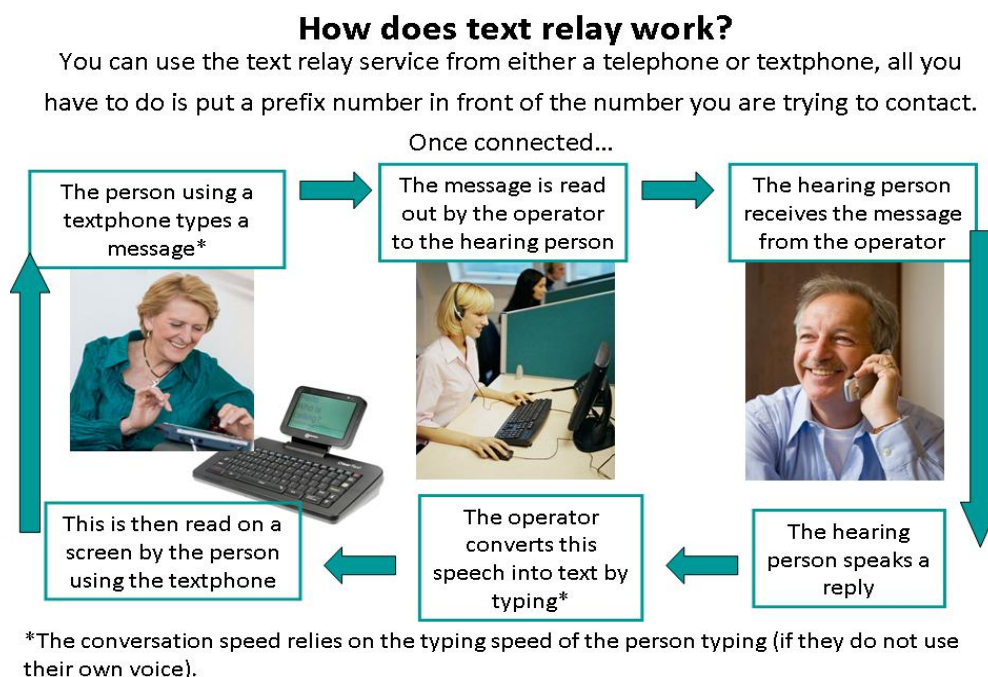
The current approved text relay service

- 2.22 All fixed and mobile CPs are required to provide access for their customers to the text relay platform operated by BT. The service currently handles around 33,000 calls each week using relay assistants as well as direct text-to-text communication between text terminals (which would not normally require a relay assistant)⁹.
- 2.23 The current text relay service enables people with hearing and/or speech impairments to communicate with others with the use of an intermediary relay assistant in a call centre. Typically, the relay assistant types what the hearing person says and speaks the words typed by the person with the hearing and/or speech

⁹ This is used almost exclusively for communications between two hearing- and/or speech-impaired users.

impairment. An illustration of how the current text relay service works is set out in Figure 1 below.

Figure 1



Source: Opinion Leader market research report¹⁰.

- 2.24 Users primarily access the service via a text-only terminal called a textphone, although some users with good speech make use of a screenphone, which can display text but does not have a keyboard as standard.¹¹ A software package is also available, which allows users to receive calls via the internet. It is also possible to make calls via the text relay platform using this software package but this requires the user to set up a separate pre-pay account.
- 2.25 The text relay service can be initiated by a hearing or speech impaired user or by a hearing user using a conventional telephone. In both cases the caller dials a prefix before the number they are calling to use the service. Therefore, a hearing user needs to know in advance that the person they are calling is hearing or speech impaired, that the text relay service exists and the correct prefix to access the service.
- 2.26 Where the hearing-impaired person uses his/her own voice, but receives text in reply, this is known as 'voice carry over'. A speech-impaired user can make use of the system in a similar way except that they have the option of listening directly to the other caller, a technique known as 'hearing carry over'. However, for the current text relay service to allow voice and hearing carry over it requires the equipment to drop the text connection while speech is taking place which disrupts the flow of conversation.

¹⁰ The full research report by Opinion Leader can be found at:

<http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/ofcom-relay-services/>

¹¹ This means that textphone to textphone calls (i.e. without a relay assistant) cannot be made using this terminal unless an optional keyboard is purchased.

The 2011 Consultation proposals

- 2.27 In the 2011 Consultation we set out the inputs to the review, including the evidence we had gathered. These included research conducted to better understand the needs and wishes of disabled end users when accessing communications services. The research indicates that text relay remains a valuable service for many users with hearing and/or speech impairments. Whilst emails, instant messenger and mobile text messaging now play an important role in meeting users' communications needs, we set out our views, based on the evidence, that a text relay service remains important to ensure that hearing and/or speech impaired users are able to communicate with others by voice telephony on an equivalent basis.
- 2.28 However, the research also identified areas where disability stakeholders considered improvements could be made to the current service, including: the inability to interrupt and lack of a 'real time' conversation¹²; the inability to express or detect emotion; the lack of privacy owing to the presence of relay operator; the lack of access to equipment and flexibility in choice of communication methods and of devices used.
- 2.29 The 2011 Consultation used the findings of the research as a starting point to help us assess the extent to which existing relay services are providing equivalence and whether, particularly in light of changes in technology and services, the obligations we have placed on CPs remain appropriate and continue to meet consumers' needs.
- 2.30 Based on the review, we set out for consultation two different options:
- Option 1 – no change to the current provision of text relay
 - Option 2 – changing/improving the current provision of text relay
- 2.31 We proposed proceeding with Option 2 and set out our proposals for how the current text relay service could be improved. We proposed that providers of PATS be required to offer an improved text relay service to disabled end users, which we called NGTR. Based on technical input by InterConnect Communications (ICC)¹³, we proposed that NGTR would work by way of an internet protocol (IP) based overlay network used in conjunction with the PSTN connection. We stated in the 2011 Consultation that we did not propose to mandate the detailed technical means by which the service would be delivered by CPs. We considered that industry would be best placed to effectively develop the platform and flexible methods of implementation that meet the functional requirements. Such flexibility would also enable industry to update the service as technological means become available, without Ofcom needing to change prescriptive rules.
- 2.32 However, the ICC report¹⁴ set out in detail the functional capabilities of the proposed new text relay platform, and the 2011 Consultation included a cost benefit analysis of our proposals. The present consultation sets out the further work we have done building on that analysis.

¹² This is primarily due to the need for callers to take turns speaking or typing and 'handover' to the other party, resulting in an inability to interrupt a conversation, pauses while handing over and hence not a fluid or natural conversation experience.

¹³ See Annex 6 of the 2011 Consultation.

¹⁴ See Annex 6 of the 2011 Consultation.

- 2.33 In the 2011 Consultation, we set out our view that internet based access methods would improve the service by:
- enabling a wider range of mainstream equipment to be used to access the service, in conjunction with a conventional phone (e.g. PCs, laptops, tablets and smartphones);
 - providing parallel voice, hearing and text, which would enable a more natural flow of conversation, interjections to a conversation and remove the need for saying 'go ahead' after each part of a conversation; and
 - increasing conversation speeds for users with good/understandable speech.
- 2.34 To implement our proposals, we proposed the removal of USC 4 on BT and the introduction of a new GC15.5 to specify the criteria which an NGTR service must meet. We proposed that GC 15.3 and the new GC 15.5 would be sufficient to ensure the effective implementation of NGTR in line with the relevant legal provisions and our objective of securing equivalence for disabled end users as provided for by the relevant EU and domestic legislation. We consulted on our view that they would do so in a proportionate way.
- 2.35 We considered the appropriate time period for the implementation of NGTR. We noted that it would be desirable for any improvements for users to be implemented as soon as possible. We proposed that NGTR should be operational within 18 months of Ofcom confirming the GC for NGTR (accounting for the time needed to plan, implement and test any changes to the text relay service).

How NGTR could work

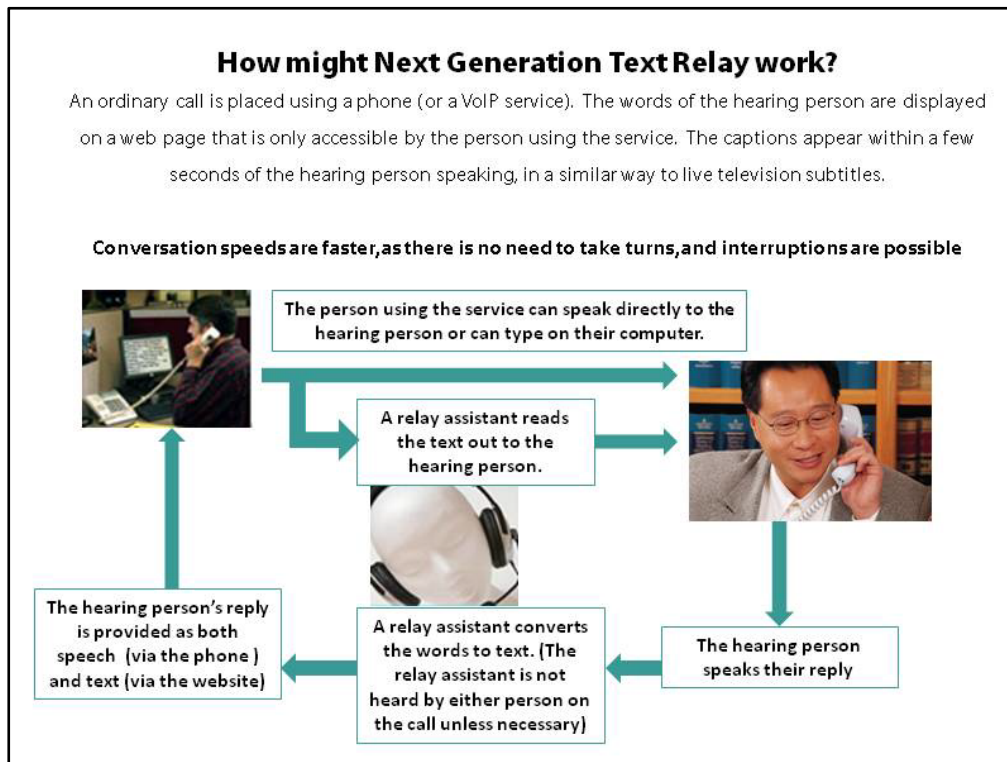
- 2.36 The proposed NGTR service would provide two-way text and two-way speech with live text for users, making use of internet-based access methods. The service would provide a flexible platform that could be used in different ways depending on the needs of the user by providing voice, hearing and text in parallel.
- 2.37 The service would need to provide the functional characteristics prescribed by the proposed new GC 15.5¹⁵, including offering users flexibility in the choice of communications methods and equipment by being compatible with fixed and mobile telephony and compatible with a range of end-user equipment including current textphones, PCs, laptops and smartphones. Although elements of NGTR require access to a data connection, under our proposals it would not be the responsibility of the CP or relay service provider to provide broadband to the end user. To take advantage of the new features of NGTR, the disabled end-user would need to make their own arrangements to subscribe for an internet package. However, current users of text relay without an internet connection would be able to receive the current level of service via their current text relay terminals.
- 2.38 The report prepared by ICC¹⁶, provided detail on elements of the technical characteristics of an NGTR service and there are two further ICC reports annexed to this consultation setting out further technical aspects of our NGTR proposals. As explained above, however, Ofcom is not proposing to mandate the detailed technical means of delivery for NGTR, as we consider industry to be best placed to effectively develop the platform.

¹⁵ See Annex 7 of the 2011 Consultation and Section 4 of this document.

¹⁶ See Annex 6 of the 2011 Consultation.

2.39 Figure 2 below provides an example of how we envisage NGTR would work:

Figure 2



2.40 The proposal is that NGTR would consist of a flexible platform that would be capable of making use of data connectivity (fixed internet access or mobile broadband) in conjunction with a PSTN or mobile connection. This arrangement would enable the PSTN connection (an ordinary landline call) or mobile phone to be used to initiate and manage the call and provide voice communications, while text would be sent and received via an internet connection. Users of the service could be provided with access to the internet-based elements of it through access to a website or via a mobile phone application (if available) on a smart phone, for which they would need a subscription to a fixed internet connection (dial-up or broadband) or a mobile broadband connection. However, this does not preclude CPs choosing to implement NGTR in another way, if they so wished, as long as their solution met the proposed requirements of GC15.5 and the proposed approval criteria.

2.41 There would need to be at least one NGTR service approved by Ofcom (if they are adopted, meeting the approval criteria proposed in this document). ICC considered that an operator of the service could meet the requirements of NGTR by using an “off the shelf” solution developed and marketed by a third party,¹⁷ although any service operator would also be free to seek approval for bespoke means of delivering NGTR. Either way, the service would need to meet the proposed requirements of GC 15.5 and any approval criteria. It would also be open to the CP or service operator to provide a service exceeding the minimum requirements, as BT has indicated its proposed NGTR service would do¹⁸.

2.42 To meet the proposed requirement to provide access to an NGTR service for their subscribers (to make and receive calls), CPs would have a choice of either: (i)

¹⁷ See Annex 6 of the 2011 Consultation.

¹⁸ See Section 3 of this document.

developing and operating the service themselves (individually or collectively), or (ii) using an approved relay service run by another organisation. Again, across industry this means that there will need to be at least one relay provider who operates the relay service, with CPs connecting with this service to meet their obligations to provide access to their subscribers.

- 2.43 If a CP is to provide an NGTR service itself it would need access to a call centre and a flexible platform which allows two-way communication between a speech impaired and/or hearing impaired user and another user via a relay assistant, either in parallel over the telephone network and IP or sequentially to current text relay terminals, as described above. Again, where the CP provides an NGTR service itself, the system could be “off the shelf” or bespoke. ICC recommended that, amongst the relevant factors in deciding how to meet their obligations, CPs would need to consider the amount of traffic to be handled by the NGTR service, its resilience in order to provide cover for emergency calls, an ability to operate 24/7, the capacity of the call centre to cope with the relay calls¹⁹, whether soundproof booths are needed for relay assistants to ensure confidentiality of the NGTR service and the training needed for the relay assistants.
- 2.44 If a CP decides to provide their subscribers with access to a NGTR service operated by BT or another third party operator, it would need to make arrangements to interconnect with the relevant service. It would be a matter for the CPs concerned to determine the appropriate method of interconnection. As set out in ICC’s report,²⁰ one way of complying could be for a CP could choose to continue to interconnect to BT’s service (BT has confirmed its intention to provide NGTR on a wholesale basis) without the need for any changes to a CPs current systems, as it could use the existing interconnect links already in place. Alternatively, a CP could interconnect through another third party provider’s NGTR service (if available). This could be done, for example, by interconnecting to the third party provider through existing interconnect links via BT or another wholesale provider (thereby removing the need for system changes), or by setting up new (standard) interconnect links with the relay provider or CP if none previously existed.
- 2.45 Ofcom has also considered, with ICC²¹, the proposal to remove the use of call prefix for inbound calls. Outbound calls made by the disabled end user would continue to require the dialling of the prefix. ICC identified two options to allocate telephone numbers to remove the need for a prefix when calling a text relay user:
- A user could be allocated another number from the number block already allocated to the network operator, and the calls forwarded to the relay platform based on a look up by the originating operator.
 - A new number block could be reserved for text relay users, and calls made to these numbers would be routed directly by the originating operator to the relay platform without a look up. The relay operator would then forward the call to the appropriate end customer line.
- 2.46 Section 3 provides more detail of these options.
- 2.47 In respect of other relevant matters such as emergency calls, directory enquiries and billing, we would not expect there to be any changes required to the arrangements

¹⁹ The expectation was that they would use their existing call centres.

²⁰ See Annex 7.

²¹ See Annex 7.

and processes CPs currently operate to meet their obligations from the current situation of a CP meeting its requirements under USC4 or GC 15.2, GC 15.3 and GC 15.4.

Video relay

- 2.48 In the 2011 consultation Ofcom considered the case for requiring CPs to provide video relay services for users of BSL, in the context of providing equivalence of access to services.
- 2.49 In Annex 5 of this document we summarise stakeholder responses in relation to our proposals on video relay in the 2011 consultation. Ofcom plans to publish a further consultation on video relay later this year. This consultation only concerns our proposals for NGTR and does not consult on any issues relating to video relay.

Impact Assessment

- 2.50 The analysis presented in this document is intended to build on and complement part of the analysis contained in the 2011 Consultation and together with that analysis represents an impact assessment, as defined in section 7 of the Act. In Sections 3 and 4 we set out further detail on a) the costs of our NGTR proposals to industry and the corresponding benefits and b) our proposals for the approvals process and criteria to be applied to approve relay providers. In relation to these points we discuss the relevant factors and evidence that we have considered, including their impact on stakeholders.
- 2.51 For further information about Ofcom's approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on Ofcom's website.²²

Equality Impact Assessment

- 2.52 Ofcom is also required to assess the potential impact of all our functions, policies, projects and practices on the equality of individuals to whom those policies will apply²³. Equality impact assessments (EIAs) assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity. We have given careful consideration to whether or not our proposal to change the provision of relay services will have a particular impact on race, age, disability, gender, pregnancy and maternity, religion or sex equality. We do not, however, envisage that the proposals contained in this consultation will have a detrimental impact on any particular group of people. Indeed, our proposals focus on furthering the interests of hearing- and/or speech-impaired users and these end users stand to benefit from any changes to relay services, which will aim to ensure equivalence to voice telephony.

Our consultation process

- 2.53 This document is an important part of our assessment of why we propose that it is appropriate to implement our proposals for NGTR. We have outlined three

²² http://stakeholders.intra.ofcom.local/binaries/consultations/better-policy-making/Better_Policy_Making.pdf

²³ Ofcom conducts equality impact assessments in order to fulfil its duties under section 149 of the Equality Act 2010.

consultation questions in this document (which can be found at Annex 4). We invite responses to these questions by 13 July 2012.

- 2.54 In Annex 1 we explain how to respond to this consultation, including through video responses from BSL users.
- 2.55 Following the consultation, once we have considered responses, we will publish a statement setting out our conclusions on NGTR, including any notifications of modifications to General or Universal Service Conditions that are needed to implement our conclusions.

Section 3

Additional analysis on NGTR

- 3.1 In this section we have considered further the relevant costs of our proposals for industry and weighed those costs against the importance of disabled end users having the ability to access fixed and mobile voice calls and the benefits to disabled end users arising from the choice of CP. We are consulting on our provisional views and proposals.
- 3.2 The 2011 Consultation set out the costs and benefits of implementing NGTR. The costs analysis covered the current cost of providing text relay, plus the incremental costs²⁴ of providing NGTR. The cost analysis was based on the assumption that BT would remain a provider of relay services and provide access to its relay service on a wholesale basis to other CPs. The costs were also based on the proposal that text relay applied to all fixed and mobile CPs and NGTR should continue to do so.
- 3.3 In summary, the 2011 Consultation set out that in determining whether it is appropriate to mandate the provision of NGTR we assessed the incremental benefits that the intervention would achieve along with the incremental costs. The incremental benefit and incremental costs in this case would be the additional benefit and cost which result from providing access to an NGTR service compared to those that exist under the current approved text relay service.
- 3.4 Estimates provided by external consultants ICC suggested that the incremental capital costs to convert the existing approved text relay service to NGTR would be around £348,000²⁵. In respect of the ongoing costs, we set out high and low demand scenarios placing upper and lower bounds on the level of demand we thought realistically possible. The table below summarises the costs for these demand scenarios (i.e. in addition to the estimated £348,000 capital cost):

Table 1: NGTR demand and cost scenarios (Figure 8 of 2011 Consultation)

Demand scenario	Ongoing costs (per year)		Incremental ongoing costs (per year)	
	Overall (£m)	Per user (£)	Overall (£m)	Per user (£)
Low ²⁶	4.4	400	0	0
Medium ²⁷	8.8	641	4.4	241
High ²⁸	23.7	688	19.3	288

- 3.5 In considering the incremental benefits of introducing NGTR, we looked at: consumer benefits; the additional value that consumers derive from using an enhanced service; externalities - benefits to friends, family and other parties that result from hearing and

²⁴ The costs covered both capital and ongoing costs.

²⁵ See Annex 6 of the 2011 Consultation.

²⁶ **low demand scenario**, we assume no impact on the number of users or average usage. We assume: 11,000 users take-up the service and average usage per user is approximately 56 minutes per month.

²⁷ **medium demand scenario**, we assume take-up increases by 25% over 5 years whilst average usage per user per month increases by 75% over the same period.

²⁸ **high demand scenario**, we assume that both take-up and the average usage per month double over 5 years. This results in 22,000 users, each making 112 minutes of calls per month.

speech impaired individuals using an enhanced relay service; and broader social value - benefits to society more broadly from the availability of these services.

- 3.6 In the 2011 Consultation we set out our view for consultation that at current and medium usage levels, the intervention to introduce NGTR would be an appropriate and proportionate means of securing the objective of equivalence, recognising that an increase in costs would therefore be the result of NGTR offering a more popular (and presumably more valuable) service. However, we recognised that dramatically increased take-up and usage could change our assessment relating to the unrestricted provision of these services. We signalled that in that event we may need to consider making further proposals on the NGTR service, such as methods for restricting use or the availability of the service.
- 3.7 We proposed imposing the requirement to provide access to an NGTR service on all fixed and mobile CPs by means of GCs. As explained Section 1 above, this would represent a departure from the way in which all CPs are currently required to provide access to a text relay service, which is through a combination of a USC on BT and GCs applying to all CPs (including BT).
- 3.8 This section sets out:
- a summary of the responses to the 2011 Consultation which relate to the cost-benefit analysis for NGTR;
 - an outline of why the responses raise important issues for our NGTR proposals and what we have done to gather further information;
 - our assessment of each of the main issues raised in the responses and our assessment of the benefits of maintaining the requirement to provide access to a relay service on all CPs; and
 - our consultation questions.

Responses to the 2011 Consultation

- 3.9 In general, respondents agreed that NGTR would provide an improved experience compared to text relay, with:
- The majority of disability stakeholders (including TAG, Action on Hearing Loss, Sense and PhoneAbility) expressed general support for our NGTR proposals, agreeing that they represent an improved service compared to the current text relay service.
 - Most relay providers agreed that NGTR would be an improvement on text relay. Reach 112 supported an integrated system with text, voice and video.
 - Some CPs acknowledged that our proposals for NGTR could provide an improved service for those with hearing and/or speech impairments.
- 3.10 A number of CPs questioned whether our NGTR proposals were necessary given the fact that, because many of the target group use mainstream methods to communicate, such as email and text, the demand for a text relay service is much reduced. In particular, the Mobile Broadband Group (MBG) considered that the proposal to require providers other than BT to offer NGTR went further than providing a basic service required by the EU framework. They argued that the lack of demand

for text relay via mobile telephones to date represents a significant stranded investment.

3.11 Respondents also raised concerns over the potential cost of NGTR:

- BT was broadly in favour of our NGTR proposals but considered that we had significantly underestimated the implementation costs. Instead of our estimated capital cost of £348,000 (which BT stated did not take into account implementation costs such as resilience for 999 calls and testing), they estimated providing an NGTR service platform would be between £1.2 million – £1.9 million depending on the required development.
- Some respondents were concerned by the removal of the wholesale and cost orientation obligations on BT resulting from the revocation of USC4:
 - Some CPs were concerned that if BT did not provide NGTR on a wholesale basis, they would either have to develop a relay service themselves or contract with an alternative service provider. Some CPs considered that the costs of providing a new NGTR service will be higher than estimated in the 2011 Consultation and had not taken account of the costs of having to develop and implement an NGTR service.
 - Some CPs argued that if BT continued to provide access to an NGTR service to other CPs but the wholesale terms of provision were not set by Ofcom, their costs of providing access to NGTR could increase significantly. Fixed-line providers, in particular, considered that there would be no regulatory framework to ensure that BT's wholesale charges were non-discriminatory and cost orientated. In order to maintain a reasonable level on the potential associated costs incurred, Sky called for a cap to be established on the wholesale charges that a relay provider is able to levy for providing access to NGTR.
- Some respondents were concerned that the 2011 Consultation did not clearly set out the technological steps they would have to take to provide access to an NGTR service:
 - Some CPs specifically queried whether the estimated costs in the 2011 Consultation took account of the costs to providers of setting up interconnection with the NGTR service.
 - The MBG argued that there could be significant set up and capital costs in integrating NGTR into a mobile context and that Ofcom had not provided estimates of these costs.
 - Some CPs were concerned that our proposal to remove the prefix on NGTR calls would create additional costs which we had not accounted for.

Key issues

- ### 3.12
- In light of these responses, we have looked closely at the cost-benefit analysis set out in the 2011 Consultation, with a view to ensuring that our analysis takes into account all of the relevant incremental costs to industry of introducing NGTR in accordance with our proposals. We have taken a number of steps, outlined in more detail below and, in this consultation, we seek to ensure that we have accurately estimated the costs to industry of upgrading the current text relay service to NGTR,

including any costs associated with any additional technological steps CPs might need to take or costs arising as a result of the revocation of the USC on BT.

- 3.13 This analysis builds on, and supplements, our assessment of the costs of benefits of NGTR as set out in the 2011 Consultation. It forms an integral part of our assessment of why we propose that it is appropriate and proportionate to mandate the requirement of access to an NGTR service on all fixed and mobile CPs. Based on the issues raised in the responses to the 2011 Consultation, we have sought further information on the following points, set out in table 2 below:

Table 2: Issues raised in responses to the 2011 Consultation and actions taken

Issue	Actions taken
BT's response regarding implementation costs for NGTR	<p>We asked BT to clarify and provide more detail on the nature of the additional costs that they anticipated incurring in their response</p> <p>We asked ICC to clarify the basis upon which they estimated the costs of upgrading the current text relay platform to NGTR</p>
Costs to industry of setting up a third party NGTR service	We asked ICC to provide detailed estimates of the costs of setting up a third party NGTR service (i.e. not provided by BT)
Technological steps required to connect to an NGTR service	<p>We asked ICC to set out the technological steps that both fixed and mobile providers would need to take to connect to an NGTR service and to examine the costs involved</p> <p>We used our information gathering powers under s.135 of the Act to request further information from the mobile network operators (MNOs) on the mobile specific costs of connecting to an NGTR service²⁹</p>
Costs of removing the prefix	<p>We asked ICC to explore the options for implementing the removal of the prefix for incoming calls and any costs associated with it</p> <p>We asked the MNOs to comment on the solutions proposed by ICC and to provide details of the costs that they envisage would be involved</p>

²⁹ The MNOs provided responses to a number of questions on mobile specific costs of connecting to an NGTR service that have provided us with information used in this section.

Ofcom's assessment and additional analysis

- 3.14 First, in light of the key issues raised in the responses, we set out further clarification on, and our assessment of, the following points:
- BT's costs of implementing / developing the NGTR platform;
 - The removal of the wholesale and cost orientation obligations on BT resulting from the revocation of USC4; and
 - The incremental costs of providing access to NGTR.
- 3.15 Second, we set out why we consider it is important and appropriate that there should continue to be a requirement on all fixed and mobile CPs to provide access to a relay service.

BT's costs of implementing / developing the NGTR platform

- 3.16 BT's response to the 2011 Consultation raised the concern that Ofcom's cost analysis did not fully take into account the costs of developing the NGTR platform. It argued that ICC's estimation of capital costs of £348,000³⁰ had been considered in isolation from the implementation costs required (for example: resilience for 999 calls and testing). BT explained that it expected these costs to be between £1.2m and £1.9m, depending on the required development. No further detail was provided.
- 3.17 We asked BT to provide more detail on the nature of the additional implementation/development costs that they considered had not been taken into account in the 2011 Consultation. BT explained that the principal difference between BT's and Ofcom's estimates of the costs of NGTR is driven by ICC's assessment that an "off-the-shelf" solution is available and BT's view that a bespoke product is needed. BT wishes for NGTR to include functionality which allows text-to-text calls without the intervention of the relay assistant. This functionality is not required by Ofcom's proposals and is not currently available as an off-the-shelf product. Nevertheless BT believes that the functionality should reduce long-term operational costs, despite having higher upfront capital costs.
- 3.18 There are a number of different ways in which CPs could choose to implement NGTR to comply with our proposed approval criteria and as noted above, for that reason we are not proposing to mandate the detailed technical means of delivering the service. In the 2011 Consultation, with ICC's assistance, we examined what we considered to be the least costly method of setting up an NGTR platform that would comply with the minimum requirements. In practice, this involved ICC determining how an "off-the-shelf" solution could be configured to meet approval criteria reflecting the kind of system we proposed and examining the likely costs of implementing such a solution.
- 3.19 We consider that although BT's plans to build functionality into the service that will allow direct text-to-text conversations is likely to benefit hearing and/or speech impaired users,³¹ this goes beyond the minimum requirements for NGTR we are proposing. Ofcom is required to ensure that, by proportionate means, disabled end users have access to telephony services equivalent to the level enjoyed by other end users. As a result, we consider that it is appropriate for our cost-benefit analysis to be

³⁰ In Annex 6 of the 2011 Consultation.

³¹ Indeed our research identified the ability to have private conversations (i.e. without the presence of a relay operator) as a particularly desirable feature.

based on a system configuration that would meet our NGTR approval criteria at a minimum of cost, and that the additional implementation/development costs highlighted in BT's response are the result of BT's commercial decision.

Provisional conclusion

3.20 We provisionally conclude therefore that our assessment of incremental costs in the 2011 Consultation accurately estimated the incremental costs (for BT) that would result from our proposal to ensure the provision of NGTR. Our assessment was informed by ICC's analysis³², which was based on its view of how an NGTR service could be set up and operated in compliance with the minimum requirements we proposed at a minimum of cost.

The removal of the wholesale and cost orientation obligations on BT resulting from our proposed revocation of USC4

3.21 USC4 currently requires BT to fund a text relay service and make it available to other providers on fair, reasonable and non-discriminatory terms, including cost-orientated charges.

3.22 Some respondents expressed a concern that the removal of USC4 would mean that BT would no longer be required to offer NGTR as a wholesale service to other providers. In particular, several CPs argued that if BT decided not to provide its NGTR service on a wholesale basis, they would either have to develop a relay service themselves or contract with an alternative service provider. They considered that the costs of providing a new NGTR service may therefore be higher than estimated in the 2011 Consultation.

3.23 Further, some CPs were also concerned that should BT continue to provide access to its relay service, no regulation would be in place to ensure that BT's wholesale charges were non-discriminatory and cost oriented. Some CPs called for a cap to be established on BT's wholesale charges in order to maintain a reasonable level on the costs they would incur by connecting to BT's service.

3.24 In this section, we consider the issues raised in the CPs responses that related to our proposal to revoke USC4 and to what extent they may affect our cost-benefit analysis. We consider each of the following issues in turn:

- The removal of the obligation on BT to provide a wholesale service;
- The removal of the cost orientation obligation on BT; and
- The impact on other CPs should BT increase the wholesale prices it charges other CPs for using its relay service.

The removal of the obligation on BT to provide a wholesale service

3.25 Capital costs will be incurred by BT in setting up its NGTR service. As we discuss above (paragraphs 3.16 – 3.20), ICC have estimated the incremental capital cost of implementing NGTR to be around £348,000 on the basis of how an "off-the-shelf" solution could be configured to meet our minimum requirements³³. The amount of capital costs BT actually incurs to set up its NGTR service will ultimately depend on

³² See Annex 6 of the 2011 Consultation.

³³ See Annex 6 of the 2011 Consultation.

the functionality BT decides to build into the service. In addition, BT will incur ongoing costs, both fixed and variable, in its day to day running of the service. ICC's view is that if NGTR demand remains at the level of the current text relay service, there will not be any incremental ongoing costs (i.e. the ongoing costs of NGTR will be the same as those of text relay).

- 3.26 Under our proposal to implement the NGTR requirement by means of GCs on all CPs, the amount of costs BT will be able to recover will depend on whether BT supplies NGTR on a retail or a wholesale basis:
- When supplying NGTR directly to end users (retail), BT will be constrained to charging the cost of an equivalent call. This will not cover the operating costs of NGTR.
 - When supplying NGTR to other CPs (wholesale), BT will be able to set a price that will allow it to cover its ongoing costs and contribute to its capital costs.
- 3.27 We therefore consider that BT has an incentive to supply its NGTR service wholesale to other CPs as widely as possible, both to limit the demand for its loss-making retail NGTR service and to earn wholesale revenues which it can offset against its ongoing costs and capital costs. BT has recently confirmed that it intends to supply NGTR to other CPs on commercial terms.
- 3.28 Under the GC framework, should CPs not wish to purchase BT's relay service, they will be free to contract with alternative approved NGTR services or develop their own approved NGTR services. We asked ICC to examine the capital costs that other CPs would face should they set up an NGTR service. ICC's report is set out in Annex 6 and estimates that the capital costs incurred would likely relate to modifying a call centre and would not be significantly different from its estimate of the costs faced by BT. ICC estimate that capital costs would be between around £182k and £333k, depending on traffic volume and factoring in accommodation, training of staff and testing of systems³⁴. Ongoing costs would be reflective of use and should correspond to a reduction in the ongoing costs of BT's service (i.e. in aggregate, the industry would not incur any additional ongoing costs).
- 3.29 ICC consider that they would not expect a CP without a call centre to move to set up its own NGTR service. The major cost of setting up a relay service is the provision of the call centre accommodation and connectivity. ICC explained that the relatively low volume of relay traffic likely to be handled by the call centre would mean that it is highly unlikely that a CP without an existing call centre would find it feasible to set up its own NGTR service. As a result, we consider that likely outcomes should CPs decide not to purchase BT's service are:
- CPs would contract with a third party call centre provider operating an approved NGTR service.
 - A large CP with spare capacity in its call centres would set up an approved NGTR service.
 - Several CPs would collectively set up an approved NGTR service to allow them to achieve sufficient volumes of traffic.

³⁴ See Annex 6.

The removal of the cost orientation obligation on BT

- 3.30 It is correct that under the GC method of implementation and following the revocation of USC4 on BT, Ofcom will not have the powers to cap the prices BT sets for providing NGTR on a wholesale basis. This means that any service offered by BT, or indeed a third party relay provider, will not be subject to price caps or ex ante price controls as regards the terms of which other CPs may acquire wholesale access.³⁵
- 3.31 The legal position as regards the imposition of wholesale obligations by way of Universal Service Condition has recently been clarified by the European Court of Justice in *The Number* case.³⁶ In that case, the Court confirmed that the specific obligations that may be imposed on undertakings by way of USC pursuant to the Universal Service Directive are to be interpreted strictly. The Court held that universal service conditions imposed on designated universal service providers can only include specific obligations relating to the provision of a service by the universal service provider itself to end users. In other words, a USC can only oblige the designated provider to provide a service to its own retail customers. It cannot lawfully require the designated provider to provide a wholesale service to third parties and consequently cannot lawfully include an obligation that wholesale charges should be cost-orientated or any other form of wholesale price control.
- 3.32 Therefore, even if we decided to implement the requirement by means of a USC on BT, wholesale requirements and/or pricing obligations of the type proposed by some CPs in their responses would not be possible. As we explain in more detail below we put forward for consultation the view that there are strong reasons to support our proposal for continuing to require all CPs (and not just BT) to provide access to a relay service.

The impact on other CPs should BT increase the wholesale prices it charges other CPs for using its relay service

- 3.33 The GC method of implementation alongside the revocation of USC4 on BT will mean that (a) CPs other than BT will continue to be obliged to provide text relay services, and (b) BT will be able to set access charges to other CPs above the cost of provision.
- 3.34 An increase in BT's access charges would not, in itself, increase the industry-wide cost of providing NGTR. However, it would redistribute those costs, with less of the cost being borne by BT and more by other CPs.
- 3.35 In order to assess the effect on other CPs of this change, we have estimated the likely financial impact of a range of potential price increases by BT (see table 3 below). We have taken the most recent estimate of BT's operating cost (£0.69 per minute) as the pricing base case and have examined the impact of different levels of prices rises over a range of scenarios for the proportion of traffic originating from other CPs:

³⁵ General Condition 15.3 will continue to require CPs to charge end users of the relay service at no more than the equivalent price as if that call had been made directly between the caller and called person without the use of the Relay Service.

³⁶ Case C-16/10 *The Number (UK) Ltd and Conduit Enterprises Limited v. Ofcom* Judgment of 17 February 2011 (Available at: <http://www.catribunal.org.uk/237-662/1100-3-3-08-The-Number-UK-Limited-and-Conduit-Enterprises-Limited.html>)

- Current volumes originating from other CPs networks (approximately 26%) forms our base case;
- Our Low scenario is 10% of total NGTR traffic originate from other CPs; and
- Our High scenario is 50% of total NGTR traffic originate from other CPs.

Table 3: Incremental cost to other CPs of BT price rises (per annum, £'000s)

Volumes originating on other CPs networks	Prices			
	Current (£0.69)	+ 15% (£0.79)	+ 30% (£0.90)	+ 45% (£1.00)
Current (26% of traffic)	-	199	398	598
Low (10% of traffic)	-	77	154	230
High (50% of traffic)	-	384	768	1,152

Source: Costs provided by BT, volumes provided by BT

- 3.36 Table 3 indicates that the overall impact on other CPs of increases in the per minute prices BT charges them for connecting to its NGTR service could range from £77,000 to roughly £1.15m per annum, depending on the level of the price increase and the volume of traffic originating from other CPs. The additional cost borne by other CPs purchasing BT's NGTR service as a result of price rises will be higher if the volumes of relay traffic originating on other CPs' networks increases. For example, table 3 shows that if the volume of traffic originating from other CPs' networks increases to 50%, a 15% increase in BT's wholesale price (£0.79 per minute) will cost other CPs an additional £384,000 per annum.
- 3.37 In addition, in order to understand the impact of BT price rises on CPs individually, we have considered the likely incremental costs CPs would face over five years (a time period over which we consider a CP might make investment decisions).³⁷ Assuming, (i) total relay volumes and operating costs remain at current levels, and (ii) the split of traffic originating from CPs remains constant over five years, a 15% price increase would cost a CP connecting approximately 40% of minutes with BT's relay service an additional £360,000 over five years. Over the same period such an increase would lead to less than £50,000 of additional costs for mobile providers (in combination).
- 3.38 In light of the above, we have considered the scope for BT to raise the price at which it supplies its NGTR service on a wholesale basis. We consider that there are likely to be two constraints acting on BT's pricing:
- The potential for other CPs to set up their own NGTR service or contract with a third party NGTR service; and
 - Regulatory constraints.
- 3.39 Should other CPs set up their own NGTR service or contract with a third party NGTR service, BT would lose a proportion of the wholesale traffic connecting to its NGTR service. As indicated above, this would limit BT's ability to recover the capital and operating cost of its NGTR service by means of wholesale supply.

³⁷ We have converted values into present value terms using the Social Time Preference Rate (3.5%) - http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

- 3.40 Further, should a rival NGTR service(s) be set up (either by (a) a CP acting unilaterally, (b) a number of CPs acting collectively, or (c) a third party) it could be provided on a wholesale basis to third party CPs in competition with BT's service. This is likely to exert some downward pressure on BT's wholesale pricing of its NGTR service. We would expect that wholesale supply of a rival relay service could offer the service operator(s) a means by which the capital and operating costs of providing the service could be recovered, and would provide CPs originating smaller volumes of relay traffic an alternative should they not be satisfied with the price or quality of BT's relay service.
- 3.41 To assess whether CPs are likely to set up their own NGTR service in response to increases in BT's wholesale prices, we have considered the likely set up costs of a rival NGTR service and the additional costs CPs would incur should they continue to connect to BT's NGTR service in the face of price rises.
- 3.42 CPs originating higher volumes of relay traffic will incur a greater amount of costs (compared to CPs originating lower volumes) should BT raise the usage price at which it supplies its NGTR service on a wholesale basis. As a consequence, we consider that CPs originating higher volumes of relay traffic will have stronger incentives to respond to increases in BT's wholesale price by setting up or contracting with a third party NGTR service.
- 3.43 We have examined text relay volume information provided by BT to assess whether other CPs are likely to have sufficient incentives to respond unilaterally in such a way. The information shows that for a CP originating 75,000 minutes an increase in BT's wholesale price by 30% (£0.21) would cost the provider an additional £158,000 per annum. ICC estimates³⁸ the capital cost of setting up a rival NGTR service handling 10% of relay traffic at £182,000. Taking these figures together, and by way of example, such a CP could, at least in principle, have an incentive to set up an independent NGTR service in response to a substantial price increase by BT.
- 3.44 We do not reach a view as to any CP would actually take such a step. This would depend on a range of other factors including its internal priorities and its expectations of future NGTR traffic and BT's future prices.
- 3.45 Many CPs have to date originated much lower volumes of relay traffic, and for some the likelihood that they would set up an independent service may be low. But, by the same token, the impact on such CPs of a price increase by BT would be small in absolute terms. For example, the total volume of relay calls originated from mobile networks in 2011/12 was approximately 77,900 (about 1% of all relay traffic). Based on current traffic levels, a 30% increase in the wholesale price of BT's relay service would cost mobile providers £15,600 over a year. As mentioned above, should a rival NGTR service be set up, CPs originating lower volumes of relay traffic are likely to be able to switch away from BT should they not be satisfied with BT's wholesale prices.
- 3.46 The prices BT charges for supplying wholesale access to its NGTR service will be subject to the ex-post monitoring regime that is in force in the wider communications sector. This will allow other CPs to make complaints under the Competition Act or bring disputes directly to Ofcom if they consider BT's wholesale prices to be unreasonable or excessive.

³⁸ See Annex 6.

Provisional conclusion

- 3.47 We provisionally conclude therefore that the additional costs to industry arising from the removal of USC4 on BT are likely to be limited. This is based on the following reasons:
- We consider that the ability to recover ongoing costs and contribute to capital costs offered by the wholesale route provides BT with an incentive to continue providing other CPs with access to its relay service. BT has confirmed its intention to supply NGTR to other CPs on commercial terms.
 - If CPs wish to set up another approved NGTR service they are free to do so and ICC's analysis suggests that the capital costs of doing so are likely to be low/moderate (£182,000 to £333,000 depending on traffic volume).³⁹ The ongoing costs are estimated to be the same as the ongoing costs of BT's NGTR service.
 - An increase in BT's access charges would not, in itself, increase the industry-wide cost of providing NGTR. However, it would redistribute those costs, with less of the cost being borne by BT and more by other CPs. We consider that BT's access charges are likely to be constrained by (i) the ability of other CPs to set up a rival NGTR service in competition with its own, and (ii) the regulatory regime in place.

The incremental costs of providing access to NGTR

- 3.48 In this section, we consider whether any additional costs should be taken into account in our cost-benefit analysis, and the effects of those costs. In particular, following consultation responses we examine: (i) CPs' costs of setting up interconnection with NGTR, (ii) the steps MNOs will need to take to integrate with NGTR, and (iii) the costs to industry of removing the prefix on relay calls.

(i) CPs' costs of setting up interconnection with NGTR

- 3.49 Some CPs queried whether the estimated costs in the 2011 Consultation took account of the costs to providers of setting up interconnection with an NGTR service provided by BT or some other third party.
- 3.50 We agree that such costs are an important part of a cost-benefit analysis of our proposals. We asked ICC to analyse the potential costs of requiring all CPs to give access to an NGTR service to their customers. We also asked ICC to identify any likely difference in costs of provisions between mobile and other fixed line providers. ICC's report (set out in Annex 7) details a number of interconnection scenarios, as follows:
- i) Relay service provided by BT: Connection to the NGTR service would be via existing interconnection links that are used for other types of traffic.
 - ii) Relay service provided by a third party relay provider. ICC presents three interconnection possibilities in this scenario:
 - a) Connection via existing interconnection links (where applicable);
 - b) Connection via transit arrangements with BT; or
 - c) Connection via newly installed interconnection links.

³⁹ See Annex 6.

- 3.51 The ICC report sets out that if BT continues to handle all text relay traffic (scenario (i) above), no new interconnection links will be required and hence there will be no additional capital costs for CPs compared to those incurred in connection with the existing text relay service.
- 3.52 If a third party sets up another approved NGTR service (scenario (ii) above), ICC report that CPs could connect via existing interconnection links (possibility scenario (ii) (a)), or where they do not have interconnection links in place, could transit this traffic via BT (possibility (b)). ICC consider that the incremental call volume generated by an NGTR platform should not be sufficiently significant to require additional interconnection capacity. But ICC consider that if additional interconnection capacity were required in either of the above scenarios, the additional costs which will be incurred would be minimal. ICC considered a case where connection to a third party NGTR service is delivered via newly installed interconnection links (scenario (ii) (c))⁴⁰ and calculated a range of costs based on the volume of traffic required to be supported. The highest estimate provided by ICC involves one off capital costs of £15,594.60 and ongoing annual costs of £21,032.88.
- 3.53 ICC did not identify any significant differences between fixed line and mobile providers interconnecting with the relay service in this regard. We therefore consider that CPs are unlikely to incur additional interconnection costs as a result of the implementation of NGTR. Should a third party NGTR service be set up and should CPs require new interconnection links to be installed the additional costs incurred are likely to be limited.

(ii) The steps mobile providers will need to take to integrate with an NGTR platform

- 3.54 There was concern expressed by the MNOs over the level of technical detail available for NGTR, and therefore their ability to estimate the implementation costs for this system. Two MNOs stated that when the current text relay service was introduced they incurred implementation costs of around £250,000 and therefore, such costs could arise with the introduction of NGTR. In addition, two MNOs suggested that it would be useful to hold a technical workshop to discuss the technical specifications for NGTR to assist in the estimation of ongoing and capital costs.
- 3.55 As mentioned above, we asked ICC⁴¹ to examine the technological steps that fixed and mobile providers would need to take to connect to an NGTR service. The ICC report (see Annex 7) considered four options. Firstly, if BT continues to provide all other CPs with access to its relay service there would be no additional interconnect steps or costs compared to the current costs. However, if someone other than BT provides the relay services ICC presented three possibilities: using direct interconnect links already in place between CPs, install new interconnect links to the relay platform operator or transit the calls via BT to the relay platform operator.
- 3.56 For each of these options, ICC consider that there should be no difference between fixed and mobile providers in respect of interconnection to an NGTR service. However, the ICC report indicates that mobile providers are unlikely to have direct interconnection links with a third party service provider (should such a service exist) due to small volumes of traffic. In such cases, ICC suggest that mobile providers would use BT as a transit operator should they needed to connect with a third party NGTR service.

⁴⁰ inter-connection possibility 2 on page 5 of ICC's report annex 7

⁴¹ See Annex 7.

- 3.57 We shared ICC's report on the technological steps required to connect to NGTR with the four MNOs and sought further information from them, pursuant to our statutory information gathering powers on their expected costs of interconnecting with an NGTR service. One MNO explicitly agreed with ICC's finding that interconnection costs should remain low, while another stated that it would probably seek to interconnect via existing links or by transiting via BT if it did not have direct links in place.
- 3.58 As regards other potential capital costs associated with the implementation of NGTR identified by mobile providers, we expect that there should not be significant changes for CPs to provide NGTR functionality to their customers. The provision of NGTR functionality to mobile users has two components, text and voice. As the provision of the text component of the calls will be provided via an IP connection, these services will be accessible as long as the user has a compatible mobile device which has internet access. This will represent a modest increase in IP traffic which we do not anticipate will require additional capacity, so there will be no additional cost. The voice component of the telephone call will be carried on the network like any other voice and will represent a modest increase in voice traffic on networks, and again we do not anticipate that this is likely to increase costs.
- 3.59 Following discussions with BT, we can confirm that Ofcom will facilitate a technical workshop involving BT and all interested CPs during the consultation period. The workshop will provide an opportunity for relevant stakeholders to gain a better understanding of the principles surrounding NGTR interoperability and implementation.
- 3.60 Subject to the discussions at the workshop and the responses to this consultation, our provisional view is that there are grounds to consider that the costs mobile providers will incur as a result of integrating their systems with the NGTR platform will be limited. In any event, they are likely to be spread over the lifetime of the service.

(iii) The costs to industry of removing the prefix on relay calls

- 3.61 A prefix is currently required to place a call through the text relay service in order to signal that a relay operator needs to be brought in to assist the hearing and/or speech impaired user with the call. In the 2011 Consultation, we proposed the removal of the prefix as part of our proposals for NGTR. The consultation did not specify whether the removal of the prefix applied to outgoing calls made by a relay user, incoming calls or both.
- 3.62 A number of stakeholders supported the removal of the dialling prefix to access the relay service, seeing the prefix as an obstacle to receiving calls. However, clarification was sought in relation to how this would actually be implemented and whether it would apply to both ingoing and outgoing calls:
- TAG questioned whether the removal would be achieved through personal telephone numbers for deaf users and, if so, how it would work in a household with both hearing and deaf residents.
 - PhoneAbility queried whether the provision of dedicated numbers for registered users would offer any advantage in equivalence and how this system would be able to recognise what type of relay service (if any) was required.

- Ofcom's Advisory Committee on Older and Disabled People (ACOD) questioned how hearing callers would know that they are accessing a relay service if they no longer had to dial a prefix.
- 3.63 Some CPs, including BT, highlighted that a complete removal of the requirement to dial a prefix to access the relay service would be difficult due to the way calls are currently routed and were unclear what changes would need to be made to their network. BT suggested that it would be possible to embed the prefix into the end user's preferred terminal dial-up software but this can only be done after the end user had registered to use the service. BT also suggested that a unique, non-geographic contact number could be allocated to registered users so that people calling a deaf and/or hearing impaired user would not need to dial a prefix.
- 3.64 In light of the consultation responses, we have given further thought to our proposal to require the removal of a prefix to access the relay service.
- 3.65 The market research conducted by Opinion Leader for Ofcom⁴² highlighted that, where a specific prefix is required, receiving incoming calls could be a problem for relevant end users. Respondents felt there was a lack of awareness that the text relay prefix is a valid UK number and not an overseas or premium rate number. Another example cited was that, when calling a hospital and leaving a message for the hospital to return the call (on a number with a text relay prefix) calls were not returned as the automated call system did not enable a prefix to be dialled.
- 3.66 Whilst the research also highlighted certain problems with making outgoing calls (it was reported that in other cases, call centre operators' lack of awareness of the text relay prefix had led to calls being terminated) it was evident from responses to the 2011 Consultation that those with hearing and/or speech impairments making outgoing calls understand how to use the prefix to bring in a relay operator to assist the call. Removing the prefix for outgoing calls could cause some confusion in households where a hearing person and hearing and/or speech impaired person both use the telephone.
- 3.67 In light of the consultation responses our revised proposal is that the removal of the requirement to dial a prefix to access a relay service should apply to incoming calls to the hearing and/or speech impaired user only. We accordingly asked ICC⁴³ to explore the options for implementing the removal of the dialling prefix which is currently used to route calls to the text relay service for inbound calls and any costs associated with that.
- 3.68 ICC identified that without a call prefix, the telephone network needs a way to identify that the inbound call is destined for a text user and so must be diverted via the text relay platform operator and identified two options. One option considered involved using a number within the number block already allocated to the network operator which would need to be forwarded to the relay platform based on a look-up. The other, seemingly more straightforward both technically and in terms of cost, considered involved allocating new number codes or blocks such as 03 or 07 to the text relay service⁴⁴ which would then be routed directly by the originating CP, without a look-up, to the appropriate relay platform (if there is more than one). The relay

⁴² The full research report by Opinion Leader can be found at:

<http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/ofcom-relay-services/>

⁴³ See Annex 7.

⁴⁴ Under numbering scheme rules, the code or block would need to be allocated to a CP and sub allocated to the relay service(s).

provider, using a look-up table, would then route the call using the relay user's standard 01, 02 or 07 number.

- 3.69 This latter option would require the allocation of an additional telephone number to the user, from a number range reserved for text relay. Customers would also retain their current telephone number, so that voice calls which do not require text relay could continue to be received as before, independently of the relay system. ICC stated that were this option for prefix removal taken there would be no additional cost to CPs.
- 3.70 We asked MNOs about ICC's proposed solution and estimated costs. It was apparent from certain providers' responses that there was some confusion over the proposed technical solution and therefore the estimated costs. The technical workshop that will be held during the consultation period will discuss the issues surrounding the removal of the prefix for incoming calls to help inform CPs of the likely technical steps and costs involved in light of the ICC report.
- 3.71 In the light of the information provided by ICC, and subject to the outcome of the technical workshop and the responses to this consultation, we are consulting on the provisional view that costs associated with the requirement to remove the prefix for incoming calls to the relay service will be limited.

Provisional conclusion

- 3.72 We provisionally conclude that the incremental costs of providing access to an NGTR service are likely to be limited. CPs are unlikely to be required to install new interconnection links to an NGTR service provider and if they are required the additional cost will be limited (the highest estimate provided by ICC involves one off capital costs of £15,594.60 and ongoing annual costs of £21,032.88). Similarly, subject to discussions held at the technical workshop, mobile providers are unlikely to need to incur significant costs to integrate their systems with the NGTR platform CPs.

The importance of a requirement on all CPs to provide access to a relay service

- 3.73 An alternative way of ensuring that hearing and/or speech impaired users have access to NGTR would be maintain USC4 on BT and remove the GCs on all other CPs.⁴⁵ This would result in BT being the only CP required to fund and provide end users with access to an NGTR service.
- 3.74 As explained above at paragraphs 2.10-2.17, Article 23a of the Directive, as implemented by the Order and the Act, gives Ofcom the power to impose GCs, where appropriate, to ensure that disabled end users have access to electronic communications services equivalent to that enjoyed by the majority of end users and can benefit from the choice of undertakings and services available to the majority of end users. We are also required by our section 3 duties to further the interests of citizens in relation to communications matters and to further the interests of consumers, where appropriate by promoting competition. We are specifically required in discharging these duties in the exercise of our functions to have regard to the needs of persons with disabilities. It is therefore important that Ofcom considers whether to exercise this discretion. The consideration of relevant costs, and of

⁴⁵ As explained in paragraph 3.31 above, Ofcom no longer has the powers to require a text relay service by imposing both USCs and GCs.

benefits and other possible reasons why we might exercise this discretion, set out in this further consultation document are an important part of the assessment Ofcom must make.

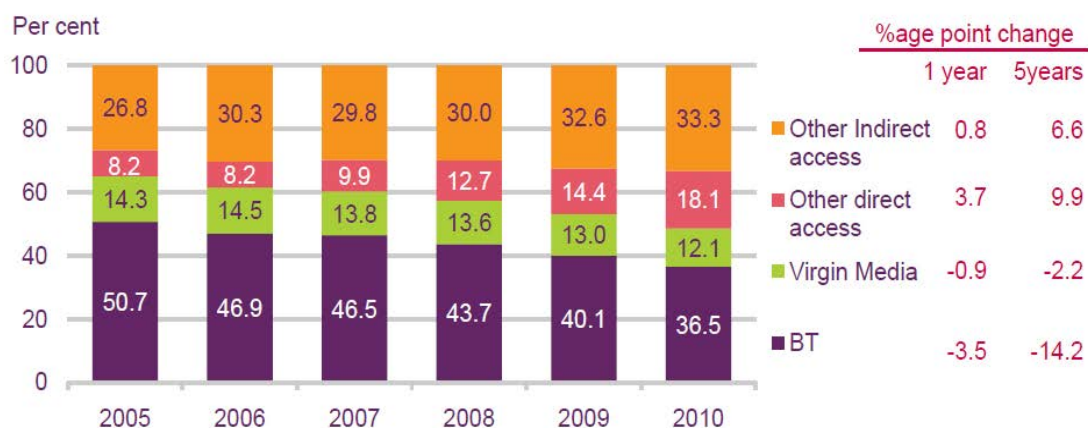
3.75 In particular, as we have explained in the preceding paragraphs, our current view on the basis of the further technical and costs evidence prepared by ICC⁴⁶ is there will be some costs to industry associated with providing access to an NGTR service, but that these costs are likely to be limited. In considering whether to exercise our powers we set these costs against the benefits to disabled end users of having access to the choice of CPs available to the majority of end users and the ability to make fixed and mobile voice calls.

3.76 To understand the potential benefits of ensuring that hearing and/or speech impaired users can access an NGTR service via all CPs (both fixed and mobile), we have considered the conditions of UK communications markets and the level of choice available to the majority of consumers. In particular, we have considered: (i) choice in the fixed voice sector; (ii) the importance of mobile voice telephony to consumers; and (iii) the preferences of users with hearing and/or speech impairments.

(i) Choice in the fixed voice sector

3.77 There are more than 100 fixed voice providers in the UK. Figure 3 below shows that since 2005 consumers have increasingly exercised their choice for these services. BT's share of the retail fixed voice market has declined from 50.7% in 2005 to 36.5% in 2010, while Virgin Media, the next largest fixed voice provider, has also seen its share of fixed voice volumes decline year-on-year.⁴⁷ Other providers' share of the market has increased from 35% in 2005 to 51.4% in 2010.

Figure 3: Retail fixed voice telecoms volumes, by provider



Source: Ofcom / operators
 Note: Excludes NTS calls

3.78 Underlying this trend are increases in the number of 'bundled' offers that have been taken up since the start of Local Loop Unbundling⁴⁸ in 2005, as consumers have

⁴⁶ Reports at Annex 6 of the 2011 Consultation and Annexes 6 and 7 of this consultation.

⁴⁷ Ofcom Communications Market Report 2011, page 286

⁴⁸ Local Loop Unbundling (LLU) covers a set of regulated wholesale service sold by BT's access division, Openreach. It allows other CPs to physically take over or share the copper access network

sought to benefit from lower prices by purchasing more than one service (e.g. fixed line, broadband and multichannel TV) from a single provider. Now, 87% of UK households buy fixed line voice services from a single supplier in a bundle. The most popular bundle is a combination of landline and broadband services, which is currently used by 45% of all consumers who bundle.⁴⁹

- 3.79 The majority of bundles offered by Virgin Media include fixed line voice services, and customers cannot reduce the bundle price by opting out of this aspect of the service. This means that if NGTR services were only available from BT, a customer who wanted both a Virgin Media bundle, and access to NGTR, would have to pay two fixed line rentals, both priced at over £10 per month.⁵⁰
- 3.80 More generally, if access to NGTR services is only provided by BT, users of NGTR would: (i) be closed out from choosing a CP other than BT for their fixed voice services, and (ii) incur higher costs should they wish to purchase a bundle of services from a provider other than BT.
- 3.81 Ofcom's provisional view is that none of these outcomes is appropriate for disabled end users.

(ii) The importance of mobile telephony to consumers

- 3.82 Mobile telephony is now integral to the way the majority of people in the UK communicate with each other and with businesses. In a 2006 report prepared for Ofcom, Europe Economics estimated that the total benefits to consumers of the mobile sector were approximately £19 billion⁵¹. As discussed below, mobile take-up and usage have increased significantly over time. We would therefore expect the consumer benefits of mobile communications to be significantly greater than £19 billion today.⁵²
- 3.83 The importance of mobile telephony to consumers is supported by research findings which show high levels of mobile phone ownership and usage among UK consumers. Figure 4 below shows that take-up of mobile has increased greatly in the last decade or so. Mobile services take-up has increased from 71% of households in 2000 to 94% in 2011. Further, since 2007, take-up of mobile services has exceeded take-up of fixed line services. In 2011, households were significantly more likely to have a mobile than a fixed line (94% versus 84%).⁵³

(the 'local loop') between an end user's premises and the BT exchange. It allows CPs other than BT to provide voice and data services to retail customers over that connection.

⁴⁹ Ofcom Consumer Experience Report 2011, page 48

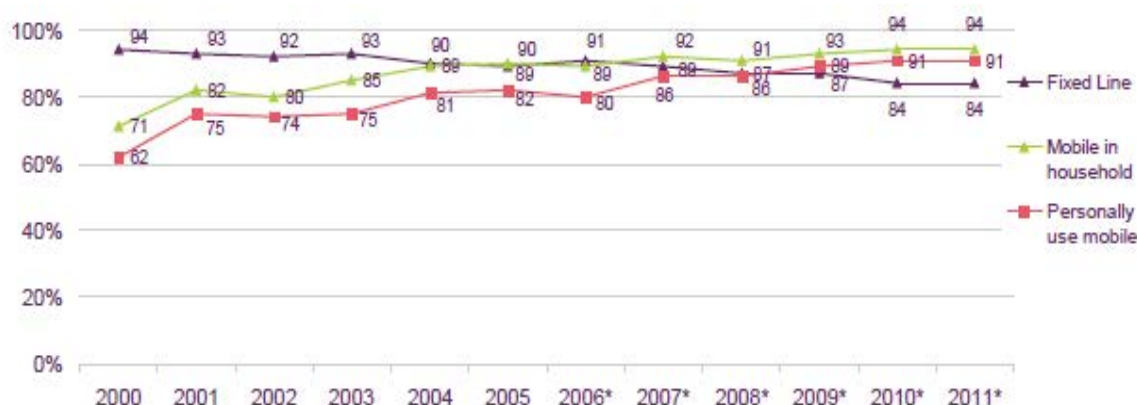
⁵⁰ As of 22/05/2012, BT line rental costs £10.75 per month, Virgin Media line rental costs £13.90 per month.

⁵¹ Report can be found at: http://stakeholders.ofcom.org.uk/binaries/research/spectrum-research/economic_impact.pdf

⁵² We have calculated that the total revenues earned from mobile subscribers (average revenue per user * number of subscribers) in Q4 2010 was approximately 1.7 times greater than those earned in Q4 2006. Applying this proportional increase to Europe Economics' 2006 estimate, implies that current consumer surplus is in excess of £30 billion.

⁵³ Ofcom Consumer Experience Report 2011, page 18

Figure 4: Take-up of mobile services: 2000-2011



Source: Ofcom communications tracking survey

Base: All adults 16+ (Q4 2000, 2133) (Q4 2001, 2159) (Q4 2002, 2138), (Q4 2003, 2150) (Q4 2004, 2131) (Q4 2005, 2214) (Q2 2006, 2439) (Q2 2007, 2265) (Q2 2008, 2109) (Q2 2009, 2085) (Q2 2010, 2106) (Q2 2011, 2862)

*Note: Data for 2006-2010 based on Q2, all other data based on Q4

3.84 Although it remains the case that a majority of consumers have both a fixed line and a mobile (79%), the overall proportion of mobile-only consumers has increased from 10% in 2005 to 15% in 2011. Notably, users in socio-economic group DE are more likely than average (25% versus 15%) to have mobile-only telephony. The proportion of hearing impaired consumers using only mobile services has increased over the last three years, and currently stands at 12%.⁵⁴

3.85 In terms of call volumes, over the past few years an increasing proportion of total voice volumes have originated on mobile networks:

- In the five years to 2010, mobile's share of originating call volumes increased by 18.7 percentage points, while BT's fell by 15.2 percentage points and other fixed providers by 3.5 percentage points.
- Figure 5 below shows that in 2010, 49.2% of voice call minutes originated on mobile networks, and based on current trends mobile will generate the majority of outgoing voice call volumes in 2011.⁵⁵

⁵⁴ Ofcom Consumer Experience Report 2011, page 151

⁵⁵ Ofcom Communications Market Report 2011, page 281

Figure 5: Total voice volumes



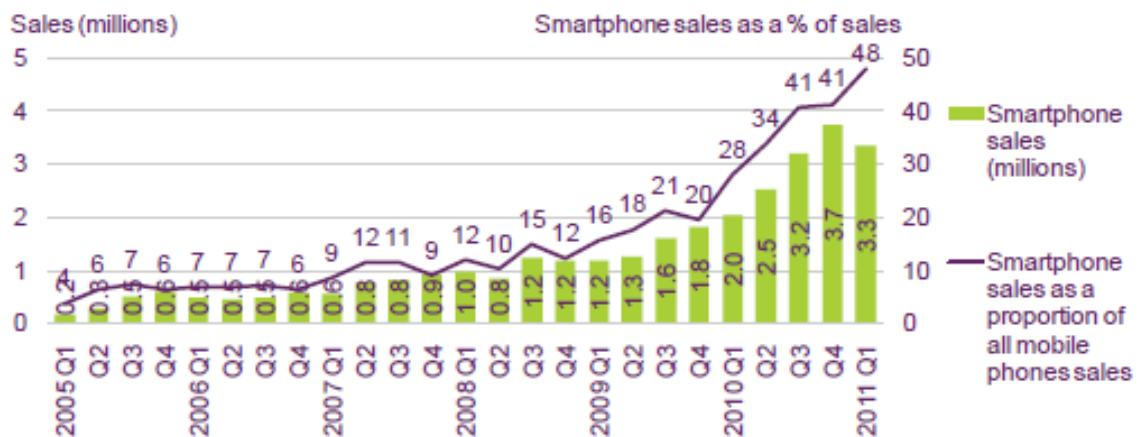
Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators

3.86 Also relevant is the take up of mobile smartphone handsets. To access an NGTR service via a mobile phone, the handset will need to have internet access to ensure full functionality. Smartphone ownership and internet usage on mobile phones provides an indication of how many hearing and/or speech impaired users will be able to access NGTR using mobiles.

3.87 The take-up of smartphones has increased dramatically over the last few years. Figure 6 below shows that the number of smartphones sold in the UK increased from approximately 1.6m annual sales in 2005 to approximately 11.4m annual sales in 2010. The sharpest increase in sales has occurred since 2009: Figure 6 shows that smartphone sales as a proportion of all mobile phones sales increased from 16% in Q1 2009 to 48% in Q1 2011.⁵⁶

Figure 6: UK smartphone sales



Source: GfK Retail and Technology Ltd, based on factual point-of-sale information

(1) Smartphones are defined as any handset running an open operating system, including Symbian (6.1 and above), Android, BlackBerry, iPhone, Palm, Windows Mobile or Linux operating systems;

(2) England, Scotland and Wales only (excludes Northern Ireland);

(3) Based on GfK's coverage of 95% of the market – data have been extrapolated to represent whole market;

(4) Only represents sales through consumer channels, i.e. most business connections are excluded

⁵⁶ Ofcom Communications Market Report 2011, page 264

- 3.88 The take-up of smartphones is likely to be the primary driver of increasing use of internet services on mobile phones. In 2011, almost a third (32%) of mobile users accessed internet services on their phone, up from 26% in 2010.⁵⁷
- 3.89 In light of the levels of mobile take up, especially the growth of mobile-only usage and the value attributed to these services, we consider that the removal of the requirement on mobile providers to provide access to an NGTR service would preclude hearing and/or speech impaired users from enjoying the full benefits of mobile communications, including voice, available to the majority of end users. Sub-section (iii) below outlines the preferences of hearing and/or speech impaired users to have access to a relay service on mobile phones.
- 3.90 We note the comments received from certain mobile providers that text relay is not used significantly on mobile networks and hence that NGTR is also unlikely to be used very much on mobile networks. However, in the light of the levels of mobile take up, especially the growth of mobile-only usage, the value attributed to these services, our provisional assessment is that in the light of the limited costs we have identified it would be inappropriate to remove the requirement on mobile providers to provide access to an NGTR service. This would result in disabled end users being excluded from the benefits of mobile voice telephony. Given the increased functionality of NGTR, in the context of rising smartphone ownership, this will increase the benefits to disabled end users.

(iii) Preferences of users with hearing and/or speech impairments

- 3.91 Having choice in the methods of communication, as well as equipment and technology, is seen as important for those who have hearing and/or speech impairments.
- 3.92 The Opinion Leader research⁵⁸ indicated that users who have hearing and/or speech impairments make use of a wide variety of communications services, such as SMS, email and instant messaging but that these methods were considered more suitable for communicating with friends and family. The research found that barriers exist that inhibit the use of certain communication services such as mobile text messaging and email for communicating with organisations such as GPs' surgeries, the local council, shops, utilities and trades people.⁵⁹
- 3.93 The qualitative research indicated that hearing and/or speech impaired users consider that they should be able to access services from any location, whether in a building with access to a landline or outside with access to mobile communications. Participants in the study felt that steps should be taken to ensure that services such as voice based, text relay, webcam or captioned telephony were available on mobile devices to allow them to participate fully in society.
- 3.94 Opinion Leader's survey found that having a phone available on the move (i.e. mobile) was an important feature for 58% of respondents. This preference for accessible mobile voice telephony for relevant end users and the benefits it can

⁵⁷ Ofcom Technology Tracker, Q1 2011

⁵⁸ The full research report by Opinion Leader can be found at:

<http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/ofcom-relay-services/>

⁵⁹ E.g. some participants reported that GPs/nurses were able to send mobile text messages or email them (e.g. to remind them of an appointment), but they would not permit a mobile text message/email to be sent back to them.

provide in terms of their participation as citizens in society, are an important part of our assessment of the appropriate scope of the rules relating to relay services.

Provisional conclusion

3.95 In light of our statutory powers and duties, we provisionally conclude that it is appropriate to ensure that hearing and/or speech impaired users continue to have access to the choice of communications providers and the benefits of equivalence of access across fixed and mobile voice services, available to the majority of end users. We therefore propose to implement the NGTR requirement by means of GCs on all CPs. We are not minded to move from a situation whereby hearing and/or speech impaired users can access relay services from all CPs (GCs on all CPs) to one in which only BT provides access (a USC on BT) for the following reasons:

- If BT was the only provider required to provide access to NGTR, hearing and/or speech impaired users who wished to use the service would be compelled to subscribe to BT. Unlike other consumers, they (i) would not have the option of using alternative fixed voice providers, (ii) could not fully benefit from the bundled packages currently available on the market, and (iii) would be excluded from enjoying the full benefits offered by mobile telephony.
- A USC on BT would place the entire financial burden of providing speech and/or hearing impaired users with a text relay service on BT.

Ofcom's provisional conclusions and consultation question

3.96 On the basis of the above, the view we put forward for consultation is that the additional costs to industry of implementing NGTR are likely to be limited on the basis that:

- The additional implementation/development costs highlighted in BT's response are primarily associated with the costs of developing a level of functionality beyond what is required by our approval criteria, it is not appropriate for our cost-benefit analysis to take them into account.
- BT has confirmed to Ofcom that it intends to supply NGTR to other CPs on commercial terms. For the reasons set out above, we expect that BT will continue to have an incentive to wholesale supply its service to recover its ongoing costs and make a contribution to its fixed costs.
- We consider that any increases in the charges BT levies other CPs for access to its relay service will have a distributional effect on costs but will not change the total costs borne by industry. BT's wholesale charges are likely to be constrained by other CPs' ability to set up their own NGTR service and self-supply (which would not be in BT's interest). ICC suggests that the capital costs of setting up a rival NGTR would be low/moderate (£182k - £333k).⁶⁰ In addition, CPs will be able to make a complaint under the Competition Act or bring disputes directly to Ofcom if they consider BT's wholesale prices to be unreasonable or excessive.
- Following further work by ICC⁶¹ and s.135 responses from MNOs, we consider that the incremental costs of providing access to NGTR by way of interconnection with a relay service operated by BT or another third party provider are likely to be limited. We recognise that some CPs are unclear about all of the technological

⁶⁰ See Annex 6.

⁶¹ See Annex 7.

steps they will need to take and the associated costs. As a result, we will facilitate a technical workshop during the consultation period and take into account relevant information from this process but there are nonetheless bases for our provisional view as to the limited nature of these costs.

- 3.97 In addition, we consider that a continuation of the requirement that all CPs must provide access to a relay service is important in light of (i) the choice of services and service providers now available to the majority of end users in the UK; (ii) the increasing importance of mobile services to consumers; and (iii) the preferences of hearing and/or speech impaired users to have a choice of communication methods. Given these points, our provisional view is that maintaining the scope of GCs across all fixed and mobile CPs is appropriate.
- 3.98 In the 2011 Consultation, we set out (at 4.121 to 4.126) that section 47(2) of the Act requires, in relation to the modification of a GC, that the modification is non-discriminatory, proportionate (which includes a requirement that it is objectively justified) and transparent. We explained that this specific test is supplemented by the duties to which Ofcom is subject under sections 3 and 4 of the Act (including our principal duty of furthering the interests of consumers and citizens).
- 3.99 In the light of the matters addressed in the 2011 Consultation and in this document, Ofcom considers that the proposals for NGTR are not unduly discriminatory. It is proposed that the requirement to provide access to a relay service meeting the proposed requirements would apply to all CPs which provide fixed and mobile publicly accessible telephony services. BT will no longer be subject to USC4, ensuring that all providers are treated in the same manner.
- 3.100 Ofcom takes the view, subject to the outcome of the ongoing consultation process, that our proposals relating to NGTR are proportionate measures for securing the objective of providing equivalence of access for consumers with hearing and/or speech impairments (across fixed and mobile CPs). In the 2011 Consultation we noted the inherent difficulties in quantifying the benefits associated with our NGTR proposals, but explained that, in our view, those benefits are likely to outweigh the costs to CPs. We have set out further in this document our views on the costs to industry of implementing our proposals for NGTR as well as the importance of the benefits to disabled end users of having access to the choice of communications providers available to the majority of end users. In the light of that assessment, Ofcom continues to consider that the proposal is proportionate measure, imposing no more burden than is necessary, to take to secure the objective of equivalence.
- 3.101 We remain satisfied that the proposal is transparent insofar as the nature and reasons for the obligations are clearly set out in this document and the 2011 Consultation, and that the measure will be contained in a GC that will be readily available.
- 3.102 Ofcom is satisfied that the proposed measure satisfies the duties set out in section 3 and 4 of the Act for the reasons set out in the 2011 Consultation (paragraphs 4.125 to 4.126).

Question 1: Do you agree that in light of the additional cost data and further clarification, in light of Ofcom's assessment of relevant benefits and other relevant considerations, all CPs (BT, fixed and mobile providers) should be required to provide access to an NGTR service?

Question 2: Do you agree that the need to dial a prefix to access a relay service for incoming calls to the hearing and/or speech impaired end user should be removed?

Section 4

Implementing NGTR

- 4.1 The 2011 Consultation set out our proposed high level implementation requirements for NGTR which included our:
- aim to ensure that there is at least one approved relay service available and that disabled end users have the same choice of CPs as are available to the majority of end users;
 - proposals to revoke USC4 and to rely on GC15.3 and a new GC15.5 to impose text relay obligations on all CPs and set out the criteria that any text relay service provided by CPs would need to meet, including being approved by Ofcom;
 - view that KPIs are an important part of ensuring that the effective operation of any relay service is maintained, the needs of users of the service are met on an ongoing basis and that the service fulfils the objective of securing equivalence of access for disabled end users. We noted the existing KPIs currently adopted by BT and our expectation that relay providers would include KPIs in their applications for approval by Ofcom covering a range of factors;
 - view that it is desirable for the improvements associated with NGTR to be available to users as soon as possible. However, we noted that our proposals would require changes to the existing service that would take time to plan, implement and test. We therefore proposed that the changes necessary to introduce NGTR should be implemented within 18 months of Ofcom's final statement amending the GC.
- 4.2 Since publishing the 2011 Consultation, we have considered further the procedural requirements we must follow in order to approve an NGTR service provider. In light of these procedural requirements we consider that it is important to set out clearly and in advance the minimum criteria by which we would propose to assess a relay service submitted for approval, were we to adopt our proposals relating to NGTR, including the minimum KPIs with which we would expect such a relay service to be capable of complying. We also consider that it is important for stakeholders that the approvals criteria and process for approval are transparent. In addition, some stakeholders responded to the 2011 Consultation expressing their desire to provide input into the KPIs.
- 4.3 We are therefore consulting on the criteria (including KPIs) we will use when considering giving approval to a relay provider and setting out an indicative approvals process. These proposals constitute minimum requirements and are based on the proposed GC 15.5 in the 2011 Consultation.
- 4.4 A number of respondents to the 2011 Consultation commented on the proposal to use a GC instead of a USC, the scope of the criteria in the proposed GC15.5, and specific amendments to GC 15.5. We are considering those consultation responses and, following this further consultation, our conclusions (taking account of the 2011 Consultation responses and responses to this consultation) on NGTR and any implementation arrangements will be set out in a statement later this year. Any changes to the proposed GC 15.5 will be reflected, as appropriate, in the approval criteria and process.

Legal framework for the approval of a relay service

- 4.5 In the 2011 Consultation we proposed amendments to GC15 to insert a new GC15.5⁶². The proposed text of GC15.5 set out the characteristics of the relay service that we would require CPs to provide to their subscribers. One of the criteria proposed is that a relay service would need to be approved by Ofcom. This is the same as the situation under the current rules, pursuant to which a relay service is defined in GC15.10 as a service that has been approved by Ofcom for the purposes of GC15⁶³.
- 4.6 Section 49 of the Act sets out the procedure to be adopted by Ofcom when considering approvals for the purpose of GCs as well as the legal tests that must be met in order to give such approval. Specifically, where Ofcom is intending to give an approval for the purposes of a GC, it is required to be satisfied that to do so is:
- a) not such as to discriminate unduly against particular persons or against a particular description of persons;
 - b) proportionate to what it is intended to achieve; and
 - c) transparent in relation to what it is intended to achieve.
- 4.7 In addition, section 49A of the Act requires Ofcom to consult for a period of at least one month where the approval would in Ofcom's opinion have a significant impact on the market for the relevant services. Ofcom's approval would then take into account the representations made by stakeholders to this consultation.

Determining the approval criteria

- 4.8 In the light of the above procedural requirements, we consider that it is important to set out clearly and in advance the criteria by which we would propose to assess a relay service submitted for approval, including the KPIs we would expect such a relay service to be capable of complying with.
- 4.9 As explained above, the 2011 Consultation set out our proposed high level implementation requirements for NGTR and how we proposed that these would provide equivalence as contemplated by the Directive and the Act. We proposed that the requirements to be included in GC 15.5 should be that the relay service provided by the CP to its subscribers must:
- Provide facilities for the receipt and translation of voice messages into text and the conveyance of that text to the terminal of the end users of any provider of PATS and vice versa;
 - Provide facilities for the receipt and transmission of voice communications simultaneously⁶⁴ with text communications;

⁶² See Annex 7 of the 2011 Consultation.

⁶³ The current approval can be found here:

<http://www.ofcom.org.uk/static/archive/oftel/publications/consumer/2003/textrelay0603.htm>

⁶⁴ The 2011 Consultation proposed "simultaneous" communications. We acknowledge respondents' comments to the 2011 Consultation that due to the unavoidable delay in recognising and typing out the speech, simultaneous delivery of speech and text is unlikely to be possible no matter what technology is used to generate it. Nevertheless, respondents suggested that parallel delivery of voice

- Provide facilities for access to emergency organisations;
- Be available for use by end users at all times;
- Be capable of being accessed by end users of the service from readily available terminals equipment, including textphones, computers and mobile telephones⁶⁵;
- Not prevent end users from communicating with other end users of other relay services;
- Not require the dialling of a prefix number for end users to access the service;
- Insofar as reasonably practicable, allow for communication between end users of the service at speeds equivalent to voice communications;
- Ensure the confidentiality of communications between end users of the service;
- Comply with any directions in respect of the service which Ofcom may make from time to time; and
- Be approved by Ofcom for the purpose of this Condition.

4.10 Whilst it will be for CPs to comply with any GC imposed on them (and therefore for CPs to ensure that the relay service it provides to its subscribers meets the requirements set out in any GC), applications for approval of a relay service must address each requirement. Therefore we propose to assess applications for approval of a relay service by reference to the ability of the service to comply with the proposed requirements of GC15.5. However, in order to ensure that the NGTR service implemented secures equivalence of access for disabled end users we consider that it is important that the relay provider commits to ensuring the operational effectiveness of the service. So, we also propose to assess applications against the proposed approval criteria, (see paragraph 4.19 below) including KPIs. These criteria would complement the proposed GC15.5 requirements in that we would use them to help us determine whether a service would meet those requirements and should be approved.

4.11 The proposed approval criteria are intended to provide the minimum level required. We consider that this is particularly important given that, otherwise, the incentives might be to offer a reduced service. We consider that the proposed approval criteria are needed to ensure:

- equivalence of access for disabled end users;
- that the effective operation of relay services is maintained;
- that the needs of users of the service are met on an ongoing basis; and
- transparency and accountability to Ofcom and end users.

and text will allow users to have a more natural flow of conversation and the ability to interrupt or interject without the need to wait for the other person to stop talking. Our statement will consider this further and make any necessary changes to the proposals for NGTR.

⁶⁵ To note that it may not be possible for end users with legacy equipment to see any benefits from the enhanced service, however, the service they receive should not be adversely affected by these changes.

- 4.12 The proposed approval criteria take account of stakeholders' responses to the 2011 Consultation that the relay service should continue to meet users' needs, that the potential for excessive cost cutting by CPs or relay providers should be addressed and TAG's view that the approval criteria and KPIs should be met as an ongoing requirement of any relay service being designated as such. The proposed approval criteria and KPIs are intended to protect consumers against any cost-driven reductions in service levels and to ensure that if, and as, new relay providers enter the market they will be subject to the same approval assessment and have to meet the same ongoing service standards as a minimum.
- 4.13 TAG and Action for Hearing Loss also commented that the approval criteria should cover outreach activity and the establishment of research and development to ensure the service keeps pace with new technology. We have considered these comments but we are not proposing to include outreach or requirements to develop new technology in the criteria. We consider that outreach activity would go beyond the provision of communications services. Technological developments that drive costs for communications providers would need be considered by Ofcom as part of an impact assessment, rather than automatically introduced.
- 4.14 Instead we intend to monitor technological developments ourselves and continue to work with stakeholders and relay providers to understand any market developments which could have consequences for relay services. Also, as the proposed approval criteria are intended to provide the minimum level required there is nothing preventing relay providers from carrying out research or outreach independently of meeting the approval criteria.

KPIs

- 4.15 As part of the approval criteria, we have proposed some minimum level KPIs. In the 2011 Consultation we set out that:
- KPIs were an important part of ensuring that any relay service fulfils the objective of securing equivalence of access for disabled end users;
 - KPIs were important to ensure the effective operation of relay services is maintained and the needs of users of the service are met on an ongoing basis;
 - BT had committed to a set of KPIs in relation to the existing relay service;
 - Our expectation was that relay providers would include KPIs in their applications for approval by Ofcom covering:
 - The Relay Assistant's role;
 - Confidentiality;
 - Training for relay assistants;
 - Call handling response times of standard and emergency calls;
 - Conversation voice to text transcription speed;
 - Accuracy of voice to text transcription; and
 - Complaints handling.

- We proposed that any approval given by Ofcom would be conditional on that service being capable of meeting those KPIs on an ongoing basis and should the service fail to meet the KPIs, Ofcom would be entitled to withdraw its approval.
- 4.16 In their responses to the 2011 Consultation, many stakeholders suggested that KPIs should be set in order to effectively monitor NGTR and allow the service to continue to develop in line with technological change. The majority of these stakeholders recommended that the KPIs should be agreed in conjunction with end users of the service and updated regularly to ensure NGTR, its quality of service and its speed remains up to date. Sense recommended we use the KPIs already in place as these performance indicators were designed to maintain the quality of the existing service. TAG considered that there should be a KPI for 95% of calls answered within 5 seconds, for operator handovers, the speed at which the conversation is relayed by the service, and the accuracy of the text received by the deaf user. TAG, Sense, the Deaf Access to Alternative Relay in Telecommunications (DAART), NDCS and UKCoD wanted increased wpm speeds in the KPIs than the current 60 wpm for text relay. UKCoD and NDCS felt speeds closer to 170wpm (which is normal for standard voice calls) should be the target⁶⁶.
- 4.17 In light of our proposals in the 2011 Consultation and the responses received, we continue to propose that KPIs can effectively support the approval criteria and the requirements of the proposed GC 15.5 and can be an effective way of ensuring that any NGTR service meets certain minimum requirements to ensure a robust and resilient service to users. To ensure transparency we have proposed KPIs as part of the approval criteria. These set out the minimum KPIs which a relay service must meet in order to seek and maintain approval from Ofcom. There is nothing to prevent relay providers offering higher service standards than those required to seek and maintain approval. We propose making the approval of a relay service conditional on the acceptance of KPIs in those, or in substantially similar, terms.
- 4.18 We have considered the 2011 Consultation responses in determining the proposed KPIs. The KPIs we are proposing for consultation in this document are based on the existing KPIs to which BT has committed in the current text relay service⁶⁷. As Sense commented, these KPIs were designed to maintain the quality of the existing service and are proven to be an achievable minimum. We propose to maintain the existing KPIs unless evidence is provided to suggest that the current KPIs would result in an inadequate or poor service.
- 4.19 Similarly, if the current KPI of 90% of calls answered in 15 seconds was changed to 95% answered in 5 seconds, as some respondents suggested, it would add significant staffing costs to the provision of the relay service not outweighed by the limited consumer benefit of the change. We propose that such a requirement would not be proportionate on that basis. Also as the proposed approval criteria and KPIs are intended to provide the minimum level required, there is nothing preventing relay providers from exceeding the KPIs as can be seen by the fact BT has in the last year exceeded its 90% of calls in 15 seconds rate⁶⁸.
- 4.20 We are proposing two additions to the KPIs currently in place – covering transcription speeds and changing relay assistant during calls. These changes are proposed in

⁶⁶ UKCoD recognised this would require a move away from keyboard based systems to speech recognition systems.

⁶⁷ The current KPIs are available in Ofcom's Access and Inclusion statement in 2009, in Annex 5.

See: http://stakeholders.ofcom.org.uk/binaries/consultations/access/summary/access_inc.pdf

⁶⁸ The quarterly performance is published by BT: www.textrelay.org

recognition of likely improvements to conversation speeds associated with NGTR and to guarantee the current practice as a minimum.

- 4.21 The current KPIs of voice to text transcription speed per call to be better than 40wpm is retained, but we have also included an additional KPI requiring voice to text transcription speed better than 60wpm averaged across all calls. This KPI is based on the proposals for NGTR put forward in the 2011 Consultation and in the proposed amendments to GC15.
- 4.22 In this connection, we acknowledge that some stakeholders argued in their 2011 Consultation responses for KPIs with higher levels reflecting their wish for the introduction of speech recognition. As we have indicated elsewhere in this document, we are proposing here approval criteria and KPIs to apply were we to adopt our NGTR proposals. We will consider responses to the 2011 Consultation and to this further consultation, including in relation to speech recognition, before we make any decisions. We will set out in our final statement how we have done so.
- 4.23 The current KPIs do not include a KPI relating to calls being handed over to another relay assistant during the call due to a shift change or emergency call. However, currently BT operate an internal target for total calls that may be subject to a handover and we have included this as a KPI⁶⁹ to reflect and guarantee the current practice. This KPI ensures minimal disruption for both parties involved in text relay calls and in recognition that there is a genuine need for some calls to be handed from one relay assistant to another. It also helps to secure compliance with the approval criteria of ensuring the service is operationally efficient and adequately resourced.
- 4.24 We are not proposing to include a requirement for regular reviews of the KPIs as we do not consider that this would be appropriate. As set out in paragraph 4.14 we intend to monitor technological developments and work with stakeholders and relay providers to understand any market developments which could have consequences for relay services.
- 4.25 We acknowledge that the proposed KPIs do not cover all of the areas set out in the 2011 Consultation (see paragraph 4.15 above), namely the relay assistant's role, training of Relay Assistants and confidentiality. However, these items are included in our proposed approval criteria. We propose that they are better suited as general approval criteria, rather than KPIs. The effect, nonetheless, is similar. There are requirements relating to these matters which an approved relay service must meet to secure the objective of equivalence of access for disabled end users.

Proposed approval criteria including KPIs

- 4.26 In order for a relay service to be approved its provider must demonstrate to Ofcom that the service is capable of satisfying the approval criteria set by Ofcom. The purpose of these criteria is to ensure that the NGTR service satisfies the basic principles set out in any GC and does so in a way that is robust, resilient, accessible and transparent.
- 4.27 In light of our discussions above, we propose that the criteria a relay provider must meet to become and remain approved are as follows:

⁶⁹ No more than 2% of total calls to be subject to a handover

Ability of the service to meet the requirements of the proposed GC 15.5

- The provider must provide an NGTR service fulfilling the relevant requirements in the proposed GC 15.5.
- The provider must ensure that in its NGTR service calls to the emergency services are prioritised and provided by a resilient network and system.
- Conversations facilitated by the relay assistant may only be recorded, or parts of the conversation noted, in the following situations: an emergency call; for quality measurement training; when a party is abusive to the relay personnel; where there is a technical problem which needs investigation.

Guarantees regarding the operational effectiveness of the relay service

- The provider must ensure there are sufficient funds, facilities and staff to provide the relay service and enable it to perform properly the administrative and technical work associated with the tasks for which it has been appointed.
- The provider must ensure that staff are appropriately and adequately trained especially in the communications needs of deaf, hard of hearing, speech impaired and deafblind textphone users.
- The provider must ensure that the systems have sufficient technical resilience and back up resources to provide an uninterrupted service to the same extent as the voice telephony networks to which it is interconnected.
- The provider must ensure that users receive call progress announcements in voice for hearing users and in text to hearing impaired users.

KPIs

- The provider must ensure that it and the NGTR service it provides are capable of satisfying on an ongoing basis the required KPIs, including that it is adequately staffed at all times – see table below.

Accountability and transparency regarding the performance of the service

- The provider must publish and make available to Ofcom, every quarter, detailed and transparent reporting on their operation, based on the KPIs.
- The provider must publish an annual report covering compliance with these approval criteria and any related issues directed by Ofcom.
- The provider must have a complaints handling procedure in place – to be agreed by Ofcom – and ensure complaints are handled in a fair and timely manner.
- The provider must carry out customer satisfaction surveys on a regular basis.
- The provider must satisfy all elements of the criteria set by Ofcom for approval on an ongoing basis. Failure to satisfy all elements, once approval has been given, may result in the withdrawal of approval by Ofcom.

Table of KPIs

Measure	Target
Standard relay calls answered within 15 seconds	90% on average 85% per 15 minute intervals ⁷⁰
Emergency relay calls answered within 5 seconds	95%
Customers surveyed expressing dissatisfaction with the relay service	<5% customers dissatisfied
Standard relay calls abandoned ⁷¹	<3% Standard Calls Abandoned
Emergency calls abandoned. This is in line with the standard voice service measure	<2% Emergency Calls Abandoned
Relay assistants to be monitored at least quarterly for speed of transcription, accuracy and process conformance	94% of calls handled correctly
In conversation voice to text transcription speed for standard/emergency relay calls, per call	>40 words per minute (wpm) (when the textphone user is able to receive 40wpm or faster
In conversation voice to text transcription speed for standard/emergency relay calls	average of at least 60 wpm average across calls
Average voice to text transcription accuracy	Better than 98%
Complaints relating to the relay service	Less than one complaint per 1000 calls
Total calls to be subject to a handover	No more than 2% of total calls

All measures except for ">40 wpm" to be averaged over a monthly period

- 4.28 Subject to our consideration of responses to this consultation, our view is that the approval criteria set out above, together with the minimum KPIs we have proposed, are appropriate means of securing the objective of ensuring that an NGTR service would be effective in securing equivalence of access for disabled end users, whilst imposing no more burden than is necessary on CPs. For instance, the requirement that the provider ensures that there are sufficient funds, facilities and staff to operate the relay service is necessary to ensure that the service is capable of providing access for disabled end users to voice communications, recognising that an

⁷⁰ This KPI demonstrates consistency of performance across each 24 hour period and limits the opportunity of long periods of poor performance being masked with one period of really good performance.

⁷¹ "Abandoned" means that the call is ended by the caller before the relay assistant is brought in.

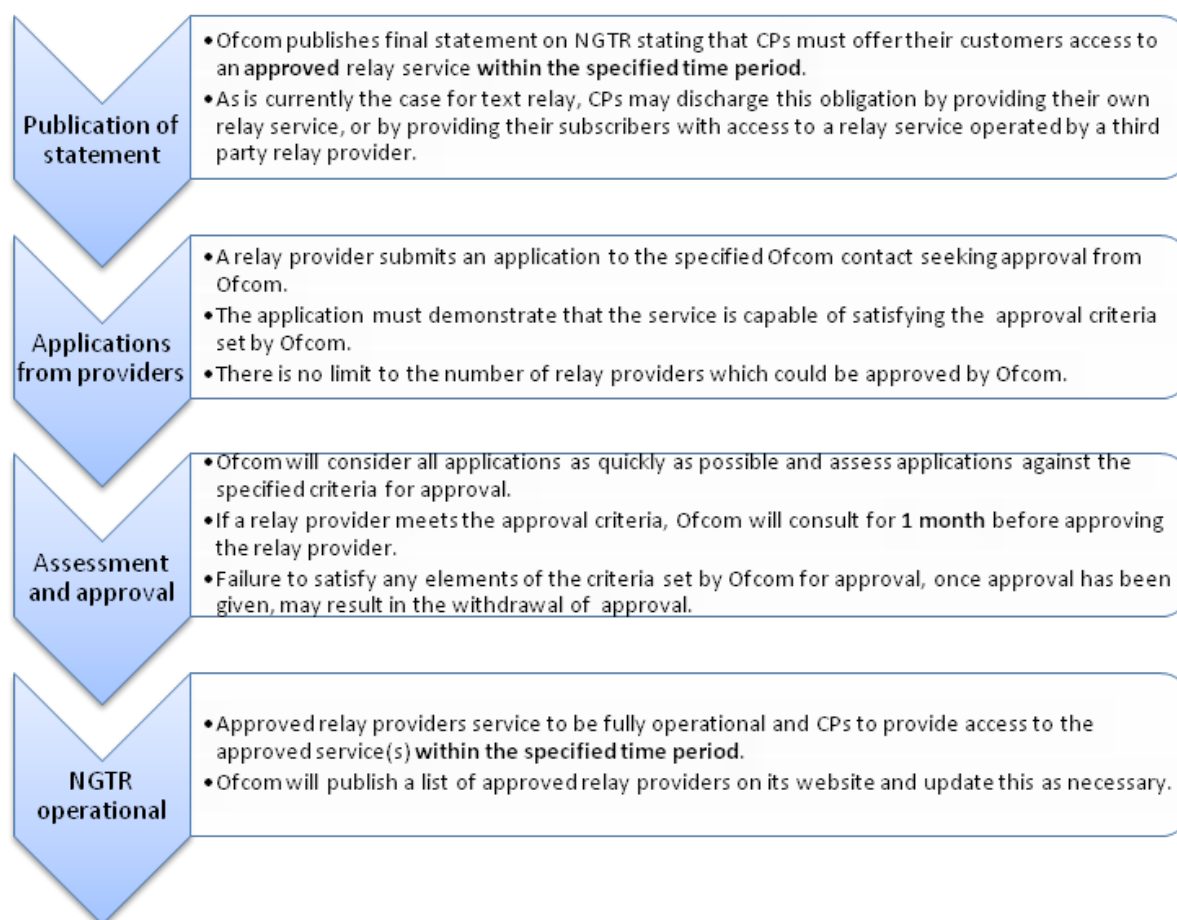
insufficiently funded and staffed service be incapable of meeting the needs of disabled end users. Similarly, the requirement that staff are appropriately trained is designed to ensure that an NGTR service is capable of meeting the complex and varied requirements of hearing and/or speech impaired end users. As explained above, we have considered, but are not proposing to require, a number of other criteria that we believe would go further than is necessary to secure the minimum level of equivalence.

- 4.29 The proposals will not discriminate between relay providers, or potential relay providers, as they will be applied consistently to all applications received. In setting out the proposed approval criteria and KPIs in advance, they meet the requirement of transparency.
- 4.30 In the context of the future approval of an NGTR service, we consider that the proposed approval criteria and minimum KPIs set out above will contribute to the efficient assessment of an application for approval and Ofcom's consideration of the statutory tests set out in section 49 of the Act in the light of our duties under section 3 and 4 of the Act.

Approval process

- 4.31 In the 2011 Consultation we proposed that an 18 month implementation period was appropriate. This time frame included all steps required to implement NGTR (such as planning, implementing and testing the new services and need to tender for customised solutions based on integrating new hardware and software) including approving relay providers. Whilst the specific time period for implementation will be determined in the statement, we consider that it is important for stakeholders to have an overview of the approvals process in conjunction with the proposed approval criteria. We have therefore set out below the indicative stages of the approvals process which will commence from the date of our final statement on NGTR (if we adopt our proposals). During the implementation period, Ofcom will work with CPs and relay providers seeking approval in order to monitor progress on implementation.

Figure 7: Indicative stages of the approvals process



Ofcom's consultation question

Question 3: Do you agree with the proposed approval criteria and KPIs? If not please specify your reasons.

Annex 1

Responding to this consultation

How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on Friday 13 July 2012**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at <http://stakeholders.ofcom.org.uk/consultations/relay-services-review-12/howtorespond/form>, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email relayservices@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A1.4 Responses may alternatively be posted to the address below, marked with the title of the consultation.
- Kiera Bower
Floor 2
Consumer Group
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A1.6 Users of BSL who find written English difficult can also submit a response in the following ways:
- Send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files. We will translate your response and publish a translation (unless your response is confidential).
 - Upload a video of you signing your response directly to YouTube (or another hosting site) and send us the URL link. We will translate your response and publish a translation.
- A1.7 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Confidentiality

- A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.
- A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>

Next steps

- A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in 2012.
- A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

- A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Graham Howell, Secretary to the Corporation, who is Ofcom's consultation champion:

Graham Howell
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA

Tel: 020 7981 3601

Email Graham.Howell@ofcom.org.uk

Annex 2

Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals. We are consulting for a period of six weeks on this occasion because we are providing further detail on an earlier consultation.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 3

Consultation response cover sheet

- A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.
- A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at www.ofcom.org.uk/consult/.
- A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing

Name/contact details/job title

Whole response

Organisation

Part of the response

If there is no separate annex, which parts?

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

Annex 4

Consultation questions

Section 3 – Additional analysis on NGTR

Question 1: Do you agree that in light of the additional cost data and further clarification, in light of Ofcom's assessment of relevant benefits and other relevant considerations, all CPs (BT, fixed and mobile providers) should be required to provide access to an NGTR service?

Question 2: Do you agree that the need to dial a prefix to access a relay service for incoming calls to the hearing and/or speech impaired end user should be removed?

Section 4 – Implementing NGTR

Question 3: Do you agree with the proposed approval criteria and KPIs? If not please specify your reasons.

Annex 5

Video Relay

Background

- A5.1 Video relay (VR) services are aimed at users of sign language. The service requires a British Sign Language (BSL) user to establish a two-way video link with a relay centre before a call is made to, or received from, a hearing person (who will be using a standard voice-only telephone connection). Once connected, the hearing person speaks to the relay operator who then signs via the video link to the BSL user. The BSL user then signs back to the relay operator and the operator speaks to the hearing person. The video link requires a broadband connection with data rates high enough to deliver high quality video.
- A5.2 VR services are commercially available in the UK during working hours. These services are primarily funded by the Government's Access to Work scheme⁷². However, some charities and public bodies also provide free access to VR services for BSL users who wish to contact them by telephone. Ofcom provides a VR service free of charge for consumers wishing to contact Ofcom in BSL⁷³. BT also provides such a service⁷⁴.
- A5.3 As part of the review of relay services, we considered whether there is a case for requiring CPs to provide their customers with access to a VR service in order to provide equivalent access to services enjoyed by the majority of end users. The 2011 Consultation set out a high level assessment and some initial proposals on the issue. The 2011 Consultation went on to describe how VR worked, our initial views on the costs and benefits of mandating a VR service and our initial proposals in relation to VR.
- A5.4 Following publication of the 2011 Consultation the Department for Culture, Media and Sport (DCMS) held two round table discussions with CPs and key stakeholders for VR services.
- A5.5 We summarise below the responses received to the 2011 Consultation in relation to VR and set out our planned next steps on VR.

Ofcom's 2011 Consultation proposals

- A5.6 In the 2011 Consultation we considered three options for VR:
- Option 1 - Do not require CPs to offer access to VR;

⁷² Access to Work is a Government scheme providing funding for the extra costs of employment due to disability (although employers are still required to make 'reasonable adjustments' for their employees under the Equality Act). This can include an agreed number of hours of face-to-face sign language interpreting or use of video relay. Details of Access to Work can be found here: <http://www.direct.gov.uk/en/DisabledPeople/Employmentsupport/WorkSchemesAndProgrammes/DG4000347>

⁷³ Details of the Ofcom VR access can be found here: <http://www.ofcom.org.uk/contact-us/video-relay-service/>

⁷⁴ Details of the BT VR access can be found here: <http://www.bt.com/includingyou/help-support-contact-bsl.html>

- Option 2 - Require the implementation of an unrestricted VR service; or
- Option 3 - Require the implementation of VR on a restricted basis.

A5.7 In the 2011 Consultation we recognised that the costs to industry of providing a VR service are likely to be significantly higher than those for NGTR, because of the need to employ specialist BSL interpreters. We considered take-up scenarios for a VR service and estimated that medium demand for the service would lead to an annual cost of £41.6 million (or a cost per user of VR of £1,890) but recognised that the cost could be significantly higher. In our high demand scenario we estimated costs of £113.4 million a year (a cost per user of VR of £3,780 a year).

A5.8 We explained in the 2011 Consultation that we had not been able to identify benefits of a similar scale to those costs and that we had concerns that the limitations on the availability of BSL interpreters could currently make it impractical to require CPs to provide an unrestricted service.

A5.9 In light of these considerations, we consulted on our initial view that a requirement to provide an unrestricted VR service would not be appropriate at this time. However, taking into account the benefits that VR offers to disabled end users, particularly BSL users who find written English difficult, we invited comments on our initial proposal that there may be a case to require the provision by communications providers of a VR service on a restricted basis (Option 3). We asked the following questions on VR in the 2011 Consultation

Question 4: Do you consider that the requirement to ensure equivalent services for disabled end users would require a mandated VR service in some form for BSL users? Please indicate the basis of your response.

Question 5: Do you agree that a restricted service would be more proportionate in providing equivalence for BSL users than an unrestricted service?

A5.10 The 2011 Consultation then explored how a restricted service might be implemented and set out several potential methods for restricting VR, including:

- time of day restrictions (the service would be available for a limited number of hours daily and/or limited to certain days of the week);
- a financial cap (the service would be available in accordance with a financial cap set on providers of VR to prevent unreasonable accelerating costs);
- a monthly allocation of minutes (a relay user would have an allocation of minutes a month charged at the free or subsidised rate);
- differentiating between work place and private use (calls would be free or at standard rates for callers from home, but from businesses charged at rates that reflect the cost of the service); and/or
- a call booking system (users wishing to make VR calls would book a time slot with the relay provider).

A5.11 The 2011 Consultation then asked for comments on each of these suggestions (and to offer any further ideas for restricting the service) and asked the following questions:

Question 6: Please provide your views on Methods 1 – 5 for a restricted VR service discussed above. Are there any other methods that are not mentioned that we should consider? In making your response, please provide any information on implementation costs for these solutions which you believe is relevant.

Question 7: Do you agree that a monthly allocation of minutes combined with a weekday/business hours service would be the most appropriate means to restricting the service?

Responses to the 2011 Consultation

- A5.12 Of the 81 responses received, the majority included responses to questions 4 to 7.
- A5.13 In general, the responses were polarised with the majority of disability stakeholders and relay providers supporting the implementation of a VR service but on an unrestricted basis. Whilst CPs stated that the responsibility for the implementation and funding of VR was not for the communications industry alone but a wider societal issue requiring input from Government and businesses/organisations. CPs suggested that Ofcom should work with the Government to ensure all organisations met their Equality Act requirements.
- A5.14 Below we have summarised the responses against each consultation question.

Consultation question 4: Is a mandated VR service, in some form, required to ensure equivalent services for BSL users?

- A5.15 The majority of disability stakeholders and relay providers stated that a VR service should be mandated for BSL users. However CPs commented that Ofcom had not fully justified the cost of providing VR and that access to services for hearing and speech impaired end users is the responsibility of UK organisations as a whole and should not rest solely with CPs

CPs

- A5.16 CPs stated that the fact some users found written English difficult represented a broader literacy issue that is better addressed by Government within the educational sphere rather than by imposing a General Condition on the communications industry.
- A5.17 CPs questioned the fairness and proportionality of having the communications sector bear the entire cost of a VR service, when many businesses and public bodies would benefit from it (by meeting their Equalities Act duties) at no cost. CPs stated that as the VR service was likely to be used to make calls to businesses and Government agencies⁷⁵, funding arrangements should be spread across all organisations. CPs stated that it would be inequitable to require the communications industry to fund a means of communication for correspondence with business and Government. Sky gave an example that “Royal Mail is not required to subsidise postage fees for all disabled customers’ correspondence with businesses and Government”.

⁷⁵ Taking into consideration approximately 5,500 call centres used by UK based businesses and services.

- A5.18 Many CPs raised concerns over our cost estimates, the uncertainty over costs and lack of information relating to platform costs and any development, testing and implementation costs. For example, Sky considered that, to date, the analysis of the demand for or benefits of VR does not support a mandated service be it restricted or unrestricted. Fixed line providers also argued that if any mandatory requirement to provide a VR service was to be imposed, Ofcom must ensure it meets the requirements of the Communications Act for technology neutral regulation.

Disability stakeholders and individuals

- A5.19 Disability stakeholders stated that a mandated VR service was required if BSL users are to enjoy equivalent access to publicly available telecommunications services. Sense and Action for Hearing Loss stated that BSL was a distinct language from English with its own grammar and vocabulary and many BSL users may struggle with text-based services as they require a certain level of fluency in written English. Without regulatory intervention, Sense felt that an adequately subsidised service would not emerge naturally in a free market.
- A5.20 Several stakeholders called for a period of piloting and testing before rolling-out such a service and recognised the need to determine how a subsidised VR service would be funded. Action for Hearing Loss believed that the government recognise that a combined video relay and video interpreting service offers significant economy of scale whilst securing access to all services whether through telephony or in person and believed that it should be the role of Government to consider this issue in a holistic and innovative fashion.
- A5.21 Several disability stakeholders recommended that interpreters employed for any future VR service should be Members of the Register of Sign Language Interpreters (MRSLI) or The National Registers of Communication Professionals working with Deaf and Deafblind People (NRCPD). As of April 2012, there were 734 fully registered sign language interpreters.⁷⁶

Relay providers

- A5.22 Relay providers considered that VR will provide equivalence for BSL users and several recommended that a VR service should be provided by both fixed and mobile providers. Two providers recommended that VR should be part of an inclusive solution for all society not just BSL users and advocated a system called Total Conversation⁷⁷ to provide benefits to all end users. REACH112 provided information on the pilot project to "validate extensions of the telephone concept to make it accessible for people with disabilities" using Total Conversation relay and the fact there would be a report on the pilot by mid-2012.
- A5.23 Two relay providers also recommended that regulated standards of service, KPIs and Codes of Practice are needed to help limit costs and drive up quality of any VR service.

⁷⁶ http://www.nrcpd.org.uk/news.php?news_id=44 – this does not include trainees who would not be sufficiently qualified for VR

⁷⁷ **Total Conversation** service is defined in [ITU-T](http://www.itu.int/rec/T-REC-F.703/fr) recommendation F.703 as "An audiovisual conversation service providing bidirectional symmetric real-time transfer of motion video, text and voice between users in two or more locations". <http://www.itu.int/rec/T-REC-F.703/fr>

- A5.24 Several relay providers said that VR's success relied on end users having the correct equipment and connectivity, all of which were outside of CPs control.

Consultation question 5: Is a restricted VR service more proportionate than an unrestricted VR service?

- A5.25 Again the responses received were polarised with the majority of disability stakeholders and relay providers arguing that a VR service should be unrestricted. CPs stated that unless an equitable funding mechanism (involving other organisations/sectors) was established then any mandated VR service would be disproportionate. However, some CPs said that a restricted service could be more proportionate and realistic, while noting that the limited number of interpreters was an obstacle to an immediate unrestricted VR service.

CPs

- A5.26 CPs did not agree that it was appropriate or proportionate for the communications industry alone to fund a VR service and that any proposal to implement VR required input from businesses and Government to determine how to fund a VR service. The UK Competitive Telecommunications Association referred to the Roundtable meeting held by DCMS in October 2011, where some disability stakeholders also expressed the view that there was a need to consider a funding method which looks beyond the communications industry.
- A5.27 CPs also raised concerns that the cost to provide a VR service could escalate and that further analysis of the costs was required. O2 had concerns that the lack of any proposed price control on a platform provider at a wholesale level could result in excessive pricing.

Disability stakeholders and individuals

- A5.28 The majority of disability stakeholders and individuals considered that a VR service should be available 24/7, particularly in the case of emergency calls. Several respondents suggested a fund (with contributions from CPs, Government and big businesses) would allow for an unrestricted VR service. For cost efficiency and to counter any shortage of interpreters, the British Deaf Association suggested any night-time calls could be outsourced to Australia or New Zealand as UK night volumes should be low and their daytime wages would be lower than UK night-time wages.
- A5.29 Several disability stakeholders questioned whether, in the light of the requirements of the Universal Services Directive (the "Directive") regarding equivalence, it was acceptable to implement a restricted service. They considered that the Directive requires equivalence and that the potential costs of the service and our proposals regarding proportionality were not relevant considerations. The Deaf Access to Alternative Relay in Telecommunications (DAART) suggested that the telecommunications industries be encouraged to create a voluntary fund to support the cost of relay services, or that DCMS mandate the creation of a fund for the same purpose.
- A5.30 However, several stakeholders also recommended that the desire for unrestricted access to VR services should not stop the introduction of a restricted service initially. They recognised that even a restricted VR service would make a huge difference to BSL users and be a step forwards from current service, and accepted restrictions might need to be in place in the initial stages in view of the costs and

limited availability of BSL interpreters and to assess the demand. Phoneability stated that if a service was not self limiting then financial limits must be put in place to avoid unlimited financial risk on CPs. Sense asked for the next consultation to provide a more accurate prediction of running costs to prevent undue restriction and argued that once the VR service is in place, there could be a move towards a less restricted or unrestricted service.

Relay providers

- A5.31 Relay providers disagreed that a restricted service was appropriate. Relay providers stated that equivalence can only be achieved through an unrestricted service and that BSL users should be able to contact Emergency Services via VR.
- A5.32 Some relay providers felt any restriction would reduce the benefits to disabled end users and it would be difficult to justify restriction in VR but no restrictions in NGTR. Some providers did acknowledge that the shortage of interpreters is the most significant restriction at present, however, Sorenson Communications and Reach 112 commented that such shortages could be overcome.
- A5.33 Sorenson Communications questioned the legality of Ofcom's proposal in the light of the revised Directive. Sorenson Communications considered that equivalence is at the heart of the relevant provisions of the EU Framework and that Ofcom's approach was at odds with those requirements. Sorenson Communications stated that the obligations to secure equivalence in the Directive are unqualified and that the only service able to provide equivalence for BSL users is unrestricted VR. Sorenson Communications agreed that as there are no other identifiable means of ensuring equivalence for this group, proportionality does not provide a justification for not providing this service. They considered that to ensure the UK compliance with the EU Framework, VR must be introduced on an unrestricted basis. Therefore, a restricted service would not be functionally equivalent, meet the UK's obligations under the EU Framework, nor the criteria for assessing equivalence set out by Ofcom in the 2011 Consultation.
- A5.34 Sorenson Communications also disagreed with our cost estimates with regards to VR. Specifically they argued that:
- when calculating per minute costs we did not appear to recognise that they will decrease over time (which they commented has happened in the US as providers have become more efficient);
 - we failed to properly quantify benefits and, by focusing on a snapshot of costs and benefits, we produced a distorted and inaccurate analysis of the costs of an unrestricted service;
 - we did not accurately allow for a fall in the costs of providing text relay services as BSL users switch to VR⁷⁸;
 - we underestimated US take-up of VR by dividing deaf households by the total deaf population (this did not take into account multiple deaf individuals per household); and

⁷⁸ The argument is that all BSL users would rationally choose to use VR instead of TR, therefore TR minutes and operating costs would fall (by a third) and this cost of approx £1.5m should be deducted from Ofcom's medium scenario total cost. The deduction should also be adjusted downwards and upwards for the low and high demand scenarios.

- we used the wrong compensation rate for VR in the US (we used a rate that was too high).

- A5.35 Significan't suggested that the best possible solution would be a pilot scheme, at least three years long, to determine and gather data that would lend to a better model for newer forms of relay services.
- A5.36 Reach 112 acknowledged that Government and organisations could also contribute to an unrestricted service and recommended integrating text and video relay services in Total Conversation and implementing a unified service for all.

Consultation question 6: Methods for restricting a VR service

- A5.37 As stated above, the majority of disability stakeholders and relay providers rejected the proposal of a restricted VR service and therefore did not provide specific comments on the means of restricting the service which were set out in the 2011 Consultation.
- A5.38 Two stakeholders recommended that Ofcom undertake further consultation with deaf people regarding what restrictions would be most suitable or carry out a pilot service on a limited timescale to gather evidence of take up and usage in the context of the UK and use this information to refine proposals for VR.
- A5.39 CPs stated there should be equitable funding arrangements across Government and organisations and any proposed restrictions should take this into account.
- A5.40 However, many respondents did provide comments on the methods proposed and these are summarised below.

Method 1 – Time of day restrictions (the service would be available for a limited number of hours daily and/or limited to certain days of the week)

- A5.41 BT raised concerns over only making VR accessible during working hours. BT was concerned that a communications industry funded VR service would then be used by organisations to make their services accessible to their customers at no cost to themselves, but at significant cost to CPs. However there could be some benefit if the VR service was only offered outside of working hours as businesses and organisations would still need to meet their accessibility duties.
- A5.42 Sky raised a concern over how 24/7 emergency calls would be facilitated if a VR service was restricted to day time hours. BT suggested that emergency organisations should be responsible for ensuring VR services for calls to 999 and 112.
- A5.43 Action for Hearing Loss recommended that limiting access to working hours would restrict personal calls, which would severely limit personal communications for BSL users, including calls to non-work related services, e.g. telephone banking etc, which may not be able to be made from work.
- A5.44 Several disability stakeholders accepted a restricted service might be required at first and suggested that any time-of-day limitations could be relaxed as interpreters become increasingly available. Several respondents stated that a skeleton service could be provided overnight due to the current limited availability of qualified interpreters.

- A5.45 One relay provider suggested that if time of day restrictions are imposed then calls can automatically be handled by text relay outside of VR operating hours or that relay providers can mitigate costs for overnight operation through sharing interpreters with other relay providers. The point was also made that whilst call volumes might be lower at night they may be more important e.g. emergency calls.

Method 2 – Financial cap (the service would be available in accordance with a financial cap set on providers of VR to prevent unreasonable accelerating costs)

- A5.46 Several disability stakeholders felt a financial cap could be a sensible means of funding the VR service, with DAART suggesting that a financial cap would not necessarily require a restricted service. However, PhoneAbility reasoned that a financial cap alone is insufficient without a measure to manage demand and several raised concerns that all the funds could be used mid year leaving users with no access to VR. One relay provider stated that a financial cap would reward inefficiency. Sorenson Communications set out that in the UK, there are a finite number of BSL users and a finite number of hours in the day. They drew comparison with the US service where the number of users and minutes of usage increased in the first few years of the service and then levelled off, saying this was both predictable and manageable without the need for a financial cap.

Method 3 – Monthly allocation of minutes (a relay user would have an allocation of minutes a month charged at the free or subsidised rate)

- A5.47 Many disability stakeholders and Sorenson Communications stated that this method did not achieve equivalence and penalises those who have the greatest need to make calls. Respondents questioned how the number of minutes would be determined, whether allocations could be pooled so high users could use lower users minutes. They also questioned how a personal cap would be applied to hearing people wishing to call a BSL user or if instead the BSL user's allocation would decrease with incoming calls from hearing users, bearing in mind such calls cannot be controlled. Concerns were also raised about the allocation of minutes running out if you were put on hold.
- A5.48 One relay provider recommended that a single, secure centralised register of users will be needed to prevent multiple accounts from users and be in line with the Data Protection Act. However, another provider warned of the additional costs of administering such a system.

Method 4 – Differentiating between workplace and private use (calls would be free or at standard rates for callers from home, but from businesses charged at rates that reflect the cost of the service)

- A5.49 PhoneAbility stated that this appeared to be the least controversial aspect of the proposals, since it would clearly be inequitable for the telecommunications industry to subsidise employers in carrying out their equality obligations (or, for that matter, to relieve Government of the costs of assisting disabled people into employment).
- A5.50 However, Action on Hearing Loss had concerns that some businesses may avoid calling deaf customers if the calls are significantly more expensive, or that they may be less inclined to employ a BSL user if they have to pay full price for VR calls they make.
- A5.51 Some respondents felt that this method would require co-ordination with the Department for Work and Pensions in terms of funding. A relay provider stated that

CPs must be required to provide itemised bills for social and business calls to allow Access to Work claims to be processed.

- A5.52 BT suggested that businesses and organisations could pay commercial rates for the VR calls connected to or from their telephone numbers. They felt that for this option to be effective, General Condition 15.3 would require an amendment to replace 'Subscriber' with 'Consumer' using the definition from the Framework Directive 2009.

Method 5 – Call booking system (users wishing to make VR calls would book a time slot with the relay provider)

- A5.53 Most disability stakeholders and Sorenson Communications were opposed to Method 5 on the basis that hearing people don't have to book in advance, not all communication can be pre-planned and the high risk of losing the booked slot should the call not be picked up at the other end.
- A5.54 A relay provider stated that for this method, a booking system would be needed which increases the complexity and costs of providing the VR service, especially if there was low take up. They also suggested that this system may not restrict usage levels.

Other methods of restricting a VR service

- A5.55 Some respondents also suggested some additional methods for providing a restricted VR service. These included:
- reverse charges for calling organisations and businesses;
 - pooling the average usage in minutes together, enabling those who have a greater dependence on the telephone to utilise the minutes that are not used by others in that month;
 - a staged incremental programme to take into account the limited number of BSL interpreters and training required to increase this number;
 - relay operators capping peak-time use to a certain proportion of overall use;
 - passing the costs on to businesses for taking calls from or making calls to deaf customers via a VR service;
 - CPs could offer free minutes of VR in place of contracted free minutes for voice calls – not necessarily on a one-for-one basis. Once the free allocation was used up VR calls would be charged at the unsubsidised rate for the remainder of the charging period.

Consultation question 7: Is a monthly allocation of minutes combined with a weekday/business hours service the most appropriate means of restricting a VR service?

- A5.56 Many respondents focused on the example given in the 2011 Consultation of 30 minutes a month, as the basis for commenting on and rejecting this method.
- A5.57 The majority of disability stakeholders felt that a 30 minute allocation was overly restrictive and disagreed that this option was the most appropriate way to provide a

restricted service. Several disability stakeholders recommended that a model should encourage the easing of restrictions at the earliest opportunity. Several disability stakeholders also raised practical concerns in relation to an allocation of minutes method which included:

- using up their monthly minutes by being put on hold; and
- determining how these restrictions would apply to incoming calls. Specifically, they queried how a personal monthly cap would be applied to hearing people wishing to call BSL users.

A5.58 Many CPs disagreed with this option. The MBG said “in view of the limited information currently available and uncertainties around the solution and the availability of signers, it is difficult to assess whether this would be the “most appropriate” means of restricting the service”. However some acknowledged that a restricted service during the day with a limited minutes allocation per user would be one way of sharing the scarce resource fairly.

A5.59 Some relay providers considered that the 30 minute allocation was too small but should restrictions have to be put in place then this method does seem the best option. Several relay providers repeated their concerns that any form of restriction was misplaced.

Other recommendations from respondents on the VR service

A5.60 Several disability stakeholders recommended that there be no or a very minimal registration system or prefix for accessing a VR service. They also stated it was important that a VR service is structured in a way that does not unduly affect the availability of BSL interpreters for face to face bookings nor negatively impact on Access to Work allocations and that there be a period of testing before a full roll out.

A5.61 CPs argued that any funding arrangements should have contributions from Government and other organisations/businesses and any discussions about costs should focus on how they will be fairly shared across the economy. Several disability stakeholder and relay providers also recognised the duties of other businesses and organisations and suggested that there was scope for the costs to be passed on to businesses taking calls from or making calls to deaf customers via a VR service. One provider commented that singling out the telecommunications industry reduces the incentive for other organisations/businesses to meet their responsibilities to provide accessible services for disabled people and places a disproportionate and unjustified cost on a single sector.

A5.62 Sky raised practical concerns over how costs will be prevented from escalating within the restricted-use model; how costs might be recovered from other businesses, how the service would be delivered, given the scarcity of BSL interpreters, and how access to a VR service can be mandated when the underlying technology used to support it (i.e. broadband) is not a mandatory service offering for CPs.

A5.63 The British Deaf Association were concerned that if a VR service was provided under contract to CPs this would push CPs to award their contract to a single VR service, namely the cheapest one. They recommend that VR services be kept at arms length from CPs and recommended adopting the BSL Broadcasting Trust model for tendering and commissioning VR services. BT also commented that if

there is one provider of a subsidised VR service this could adversely affect the existing relay providers.

Ofcom's next steps and further consultation

- A5.64 We are currently taking forward our NGTR proposals and subject to the responses received to this consultation are planning to publish a statement on NGTR later this year. We will then consider further the position in relation to particular groups of disabled end users, e.g. BSL users, and the need/appropriateness of any further measures. On this basis Ofcom intends to publish a further consultation on video relay later this year.
- A5.65 We will continue to liaise with stakeholders, and as any action taken by DCMS will impact on our future proposals for video relay, we will also continue to liaise with DCMS to keep abreast of developments at DCMS and its work to encourage the availability of video relay services by communications providers, businesses and public bodies on a voluntary basis.

Annex 6

ICC report: technical comments on alternative relay service suppliers and estimate of associate costs

- A6.1 Ofcom commissioned InterConnect Communications (ICC) to provide the following report which provides technical advice on what would happen should BT no longer offer a relay service to other CPs (so they must find an alternative way of providing relay services to their customers) but on the assumption that BT would continue to deal with the traffic which is originated by its customers.
- A6.2 Alongside this report, ICC supplied some information in Excel spreadsheet format. These contained confidential data and it is not possible to make these available in any meaningful form.
- A6.3 This report is published separately.

Annex 7

ICC report: technical comments on use of relay service suppliers and estimates of additional costs

- A7.1 Ofcom commissioned ICC to provide the following report which provides technical advice on the migration of the Text Relay Service and the costs of connecting to it for other CPs.
- A7.2 This report is published separately.

Annex 8

Glossary of terms and definitions

Broadband	A data service or connection that is capable of supporting always-on services which provide the end user with high data transfer speeds. Often used for transmitting bulk data or video or for rapid Internet access.
Caption Telephony	A type of relay service that allows for conventional two-way speech as well as delivery of captions to the hearing-impaired caller.
Communications Act	The Communications Act 2003, which came into force in July 2003
Communications provider	Provider of electronic communications services over an electronic communications network
Content Service	A service consisting of one or both of the following- the provision of material with a view to its being comprised in Signals conveyed by means of an Electronic Communications Network; the exercise of editorial control over the contents of Signals conveyed by means of a such a network
Electronic communications service	Any service consisting in, or having as its principal feature, the conveyance by means of an Electronic Communications Network of signals, except in so far as it is a content service, and which is provided so as to be available for use by members of the public
Electronic communications network	A transmission system for the conveyance, by the use of electrical, magnetic or electro-magnetic energy, of signals of any description; and such of the following as are used, by the person providing the system and in association with it, for the conveyance of the Signals (i) apparatus comprised in the system; (ii) apparatus used for the switching or routing of the Signals; and (iii) software and stored data
General Conditions	Obligations on all communications providers
HCO - Hearing Carry Over.	The ability for a relay service to deliver the other parties speech to the hearing-impaired user.
Internet	A global network of networks, using a common set of standards (e.g. the Internet Protocol), accessed by users via a service provider.
Internet Protocol (IP)	The data protocol used for routing and carriage of messages across the internet and similar networks.
Member States	Countries that are part of the European Union. There are currently 27 EU Member States.
Mobile Broadband	Various types of wireless high-speed internet access through a portable modem, telephone or other device.
Node	Equipment which enables the interconnection of relay assistant's terminals and headsets, telephone circuits, and the internet.
Ofcom	Office of Communications. The regulator for the communications industries, created by the Communications Act 2003.
Oftel	Office of Telecommunications, whose functions transferred to Ofcom on 29 December 2003.
Platform	A system, comprised of operator and user equipment and services or functions provided by the system operator.

PCs/Macs	Personal computers.
Public switched telephone network (PSTN)	The PSTN is the network of the world's public circuit-switched telephone networks. Originally a network of fixed-line analogue telephone systems, the PSTN includes mobile as well as fixed line telephony.
Publicly Available Telephone Service (PATS)	A service made available to the public for originating and receiving, directly or indirectly, national or national and international calls through a number or numbers in a national or international telephone numbering plan.
Speech recognition	A technology in which computer software translates spoken words into a text.
Tablet (PC)	A mobile computer, larger than a mobile phone or personal digital assistant, integrated into a flat touch screen and primarily operated by touching the screen. It often uses an onscreen virtual keyboard or a digital pen rather than a physical keyboard.
Text Relay	A system which allows hearing and speech-impaired people to converse over the telephone with hearing callers by converting their speech to text and vice versa. The conversion is done by Relay Assistants working at a Relay Centre.
Universal Service conditions	Obligations on one or more designated Universal Service Providers.
Universal Service Directive	Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (amended by Directive 2009/136/EC).
Universal Service Order	Order made by the UK government that transposes the Universal Service Directive into UK law.
Universal Service Providers	BT and, in Hull, KCom, who have certain regulatory obligations designed to ensure that a basic level of telephony service is available to everyone in the authorised area upon request.
VCO - Voice Carry-Over	The ability for a relay service to deliver the hearing-impaired person's speech to the other caller.