



# Review of Relay Services

Decision on the introduction of Next Generation Text  
Relay

Statement

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## Section 1

# Summary

- 1.1 This Statement presents our decision to amend General Condition 15 in order to require communications providers (both fixed and mobile) to provide access for their customers to an improved relay service, which we have called Next Generation Text Relay (NGTR). We are also revoking Universal Service Condition 4, which requires BT to fund a text relay service and provide wholesale access to users of other communications providers.
- 1.2 Relay services enable people with hearing and/or speech impairments to make and receive telephone calls. At present, all fixed and mobile communications providers have to provide access to a text relay service approved by Ofcom. The service is currently funded and provided by BT pursuant to its Universal Service obligations. It 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 voice to text and text to voice in order to facilitate the call.
- 1.3 We started a review in 2011 to examine the current requirements on communications providers to provide text relay services for their customers, particularly in the context of significant technological developments and changes in the legislative framework at the European level. Notably, there have been changes to the Universal Service Directive, which requires Member States to take specific measures to ensure access to, and affordability of, voice telephony services for end users with disabilities that is equivalent to the level enjoyed by other end users. The need to secure *equivalence of access* for disabled end users has driven this review.
- 1.4 We set out our analysis and proposals from the review in consultation documents published in July 2011 and May 2012. We proposed changes to the rules to require the introduction of a new service, which we called NGTR, to be provided by all communications providers. NGTR represents a significant technological improvement to the existing text relay system, taking advantage of both voice and data connections to improve the functionality of the current text relay service by providing users with the ability to increase conversation speeds, interrupt conversations and have two-way speech. It will also allow users to benefit from the use of mainstream equipment such as PCs and tablets, rather than being restricted to specialist equipment such as textphones. We engaged extensively throughout this process with disability and industry stakeholder groups.
- 1.5 The 2011 Consultation set out our initial proposals for NGTR based on consumer research and technical analysis from consultants InterConnect Communications (ICC). After reviewing responses to the 2011 Consultation, we decided to consult further in 2012 on the costs and benefits of NGTR, the case for all communications providers to provide access to the service and the criteria that Ofcom will use to consider relay providers for approval.
- 1.6 Our proposals in the 2012 Consultation were based on further cost analysis carried out for Ofcom by ICC. This analysis indicated 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, would be limited. We noted that BT had confirmed its intention to develop an NGTR service and provide a wholesale access service for other communications providers. We noted that if it were necessary for other communication providers to

set up an NGTR service independently from BT, the information provided by ICC suggested that they would face similar set up costs to those identified for BT.

- 1.7 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 consulted on our view that it is appropriate that disabled users have the choice of communications provider. We considered that both fixed and mobile communication providers should be available to the majority of end users and that customers should not be limited to voice telephony services from BT (or from fixed-line communications providers). We explained that maintaining the current position, whereby all communications providers are required to provide access to the relay service, would allow disabled consumers to benefit from the competitive and dynamic communications market present in the UK, including the benefits of mobile voice telephony.
- 1.8 Having carefully considered all of the responses to both consultations and following extensive dialogue with disability and industry stakeholders, this Statement sets out our decision to require all fixed and mobile communications providers to provide access to a relay service with NGTR functionality. We will implement this through a modification to General Condition 15 and the revocation of Universal Service Condition 4. Annexes 2 and 3 contain the formal notifications to this effect. These changes will take effect immediately, with communications providers being required to implement NGTR within 18 months. The existing text relay service will continue to be in place in the interim, pending full implementation of NGTR. On the basis of the evidence presented in our two consultations and following careful consideration of consultation responses we consider that it is appropriate to proceed with our proposals for NGTR, which represent a proportionate means of securing equivalence of access for hearing and/or speech impaired end users, as required by the Universal Service Directive.
- 1.9 Alongside the implementation of NGTR, we will continue to work with industry and disability stakeholders to explore the potential impact of speech recognition technology on the accuracy and speeds of the NGTR service. At the present time, however, we have decided not to require the use of speech recognition technology as part of NGTR.
- 1.10 In addition, we will be continuing our review of relay services by examining the case for introducing requirements on communications providers to provide access to video relay services for users of British Sign Language. This includes working with government and disability stakeholders on DCMS's initiative to encourage the voluntary provision of video relay services by communications providers and businesses.

## Section 2

# Introduction

## Scope of this document

- 2.1 This document follows consultations on our review of relay services published on 28 July 2011 (the “2011 Consultation”) and 29 May 2012 (the “2012 Consultation”). In these documents we consulted on proposed 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 Responses to the 2011 Consultation raised a number of important and complex issues around the costs to industry and the benefits to disabled end users of implementing our proposals, particularly as regards the provision of access by mobile providers. To address these issues, the 2012 Consultation provided further analysis and data on our proposals for NGTR. The 2012 Consultation also set out proposed criteria and an approval process for relay services. We invited further views from stakeholders on this updated analysis.
- 2.3 The 2012 Consultation closed on 13 July 2012 with a total of 17 responses received: 7 from communication providers (“CPs”) and 10 from disability stakeholders and individuals. Non-confidential responses can be found on our website<sup>1</sup>. Having carefully considered all of the responses to both consultations and following extensive dialogue with disability and industry stakeholders in the course of our review of relay services, this Statement sets out our decision to require all fixed and mobile communications providers to provide access to a relay service with NGTR functionality.

## The importance of communications services

- 2.4 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<sup>2</sup>.

## The changing communications landscape

- 2.5 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) and 78% have internet access<sup>3</sup>. Such services allow consumers increased choice in how to communicate e.g. via email, instant messenger, social media, text as well as voice calls.

<sup>1</sup> <http://stakeholders.ofcom.org.uk/consultations/relay-services-review-12/?showResponses=true>

<sup>2</sup> 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](http://stakeholders.ofcom.org.uk/binaries/consultations/access/summary/access_inc.pdf)

<sup>3</sup> Ofcom Consumer Experience Report, 2011, page 18 and 29.

- 2.6 Such growth in the availability and use of broadband and mobile data services, particularly email and mobile text messaging, has helped those with hearing and/or speech impairments to communicate. However, 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 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 EU and other countries, including the UK, 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, under current requirements, fixed and mobile CPs are required to provide access for their customers to a text relay service. This service is currently funded and operated by BT<sup>4</sup> pursuant to its obligations under Universal Service Condition 4.

## The legal framework

- 2.7 The legal framework within which Ofcom has conducted its review of relay services is set out in full in Annex 5 and reference should be made to that Annex for a more detailed explanation of the legal framework. In summary, the legal framework consists of the amended Universal Service Directive (the “Directive”)<sup>5</sup>, provisions of the Communications Act 2003 (the “Act”) and the Universal Service Order<sup>6</sup> (the “Order”), as implemented by Ofcom.
- 2.8 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”), which includes voice telephony services but not broadband,<sup>7</sup> 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.
- 2.9 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”), which includes voice and broadband,<sup>8</sup> 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.
- 2.10 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

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<sup>4</sup> Other CPs pay BT when their customers access the relay service.

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

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

<sup>7</sup> 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.

<sup>8</sup> 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.

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) and in relation to a wider range of services extending beyond fixed PATS (e.g. mobile voice telephony services). The recitals to the Directive provide further indications of the factors that might be relevant when considering equivalence of access for disabled end users.

2.11 Recital 13 of the Directive provides that:

“Specific measures for disabled users could include, as appropriate, making available accessible public telephones, public text telephones for deaf or speech-impaired people, providing services such as directory enquiry services or equivalent measures free of charge for blind or partially sighted people, and providing itemised bills in alternative format on request for blind or partially sighted people”.

2.12 Recital 12 to the Citizens’ Rights Directive<sup>9</sup> which was the directive amending the Universal Service Directive, states that:

“Equivalence in disabled end-users’ access to services should be guaranteed to the level available to other end-users. To this end, access should be functionally equivalent, such that disabled end-users benefit from the same usability of services as other end-users, but by different means”.

2.13 Article 8 of the Framework Directive<sup>10</sup> requires Member States to ensure that in carrying out the regulatory tasks specified in the EU framework, including the Directive, national regulatory authorities are to take all reasonable measures which are aimed at achieving a number of specified objectives. Such measures must be proportionate to those objectives, which include:

- i) Promoting competition for communications services by ensuring that users, including disabled users with special social needs derive maximum benefit in terms of choice, price and quality<sup>11</sup>.
- ii) Promoting the interests of citizens of the EU by addressing the needs of specific social groups, in particular disabled users, elderly users and users with special social needs<sup>12</sup>.

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

<sup>9</sup> Directive 2009/136/EC, the Citizens’ Rights Directive. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0011:0036:EN:PDF>

<sup>10</sup> Directive 2002/21 (as amended) the Framework Directive. Available at: [http://ec.europa.eu/information\\_society/policy/ecom/doc/140framework.pdf](http://ec.europa.eu/information_society/policy/ecom/doc/140framework.pdf)

<sup>11</sup> Article 8(2)(a) Framework Directive

<sup>12</sup> Article 8(4)(e) Framework Directive



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.
- 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. Similar considerations are also relevant to the revocation of conditions, including USCs.
- 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 to operate a text relay service.

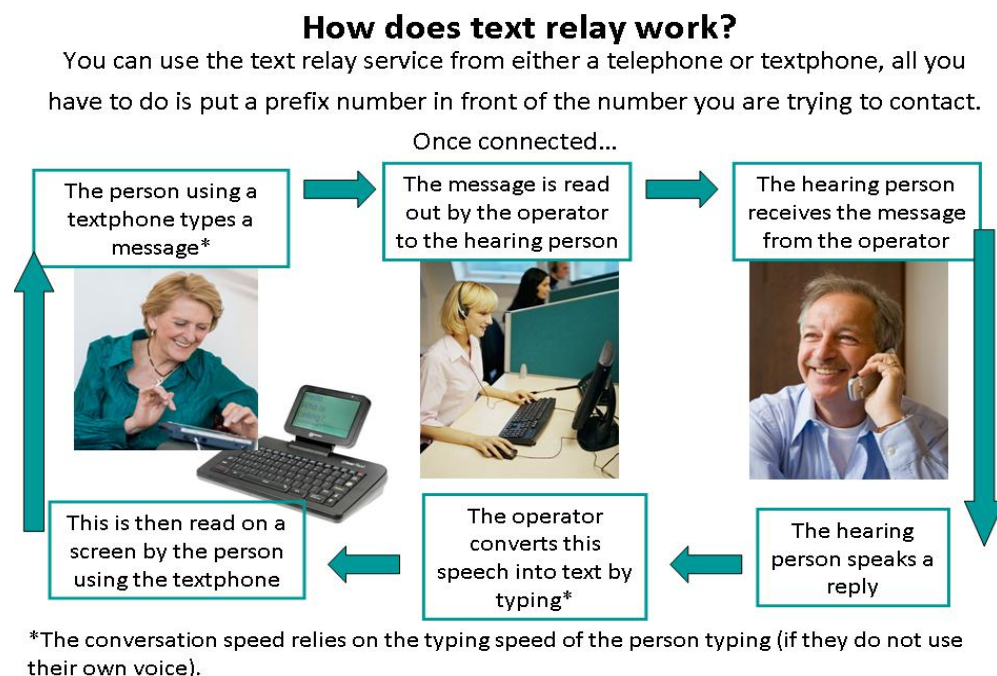
## **The objective of the review**

- 2.19 As explained in the 2011 and 2012 Consultations, our review has sought to assess whether the current arrangements for the provision of relay services continues to provide equivalence of access to voice telephony for end users with hearing and/or speech impairments.
- 2.20 In this regard, in the 2011 Consultation, we used the findings of market research to put forward a number of common factors that we proposed using to inform our proposals for the measures necessary to secure equivalence of access for people with hearing and/or speech impairments. 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.
- 2.21 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.
- 2.22 A full description of the details of the inputs to the review and our proposals is contained in the 2011 Consultation and 2012 Consultation, and reference should be made to those documents for further background.

## The current approved text relay service

- 2.23 All fixed and mobile CPs are required to provide access for their customers to a text relay service. In practice CPs discharge this obligation by connecting 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)<sup>13</sup>.
- 2.24 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 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 report*<sup>14</sup>.

- 2.25 Relay users primarily access the service via a text-only terminal called a textphone, although some users with good speech make use of a phone, that can also display text, but which does not have a keyboard as standard. 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.
- 2.26 The text relay service can be initiated by a hearing and/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 caller

<sup>13</sup> This is used almost exclusively for communications between two hearing and/or speech impaired users.

<sup>14</sup> The full research report by Opinion Leader can be found at:

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

needs to know in advance that the person they are calling is hearing or speech impaired and wishes to use a relay service, that the text relay service exists and the correct prefix to access the service.

- 2.27 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 user, a technique known as 'hearing carry over'. However, given the technical characteristics of the service, 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. This disrupts the flow of conversation.

## The 2011 Consultation proposals

- 2.28 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 indicated that text relay remains a valuable service for a substantial number of 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 in a way which is equivalent to the use of voice services by other users.
- 2.29 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' conversation<sup>15</sup>; 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.
- 2.30 In the 2011 Consultation we used the findings of the research as a starting point to help us assess the extent to which existing relay services were providing equivalence of access for hearing and/or speech impaired users 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.
- 2.31 Based on the review, we set out for consultation two options:
- Option 1 – no change to the current provision of text relay
  - Option 2 – changing/improving the current provision of text relay
- 2.32 We consulted on our proposal to proceed with Option 2 and set out our proposals for how the current text relay service could be improved. We proposed that fixed and mobile CPs be required to offer an improved text relay service to disabled end users, which we called NGTR. Based on technical input by ICC<sup>16</sup>, 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

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<sup>15</sup> 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.

<sup>16</sup> See Annex 6 of the 2011 Consultation.

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 set or change prescriptive rules.

- 2.33 The ICC report<sup>17</sup> 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.
- 2.34 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 simultaneous 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.
- 2.35 To implement our proposals, we proposed the modification of GC15 to add a new clause, GC15.5, to specify the requirements that an NGTR service would have to meet. We proposed that GC15.3 and the new GC15.5 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. On that basis we proposed the revocation of USC4, which requires BT to fund and provide the text relay service as a matter of its Universal Service obligations. We consulted on our view that our proposals would secure equivalence of access in a proportionate way.
- 2.36 We also 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, recognising that it would nevertheless take industry time to develop and implement the platform. We proposed that NGTR should be operational within 18 months of Ofcom modifying the GC (accounting for the time needed to plan, implement and test any changes to the text relay service).

## The 2012 Consultation proposals

- 2.37 In the light of the responses received to the 2011 Consultation, we decided that it was 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

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<sup>17</sup> See Annex 6 of the 2011 Consultation.

- 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.
- 2.38 The 2012 Consultation summarised and responded to the 2011 Consultation responses relevant to our assessment of the costs and benefits of our NGTR proposals and the proposed approval criteria. 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 consulted further on:
- the incremental costs of establishing a relay service for BT and/or for a third party provider;
  - aspects of the removal of USC4 on BT;
  - the incremental costs for other CPs of interconnecting with the relay service;
  - the importance and appropriateness of the requirement to provide access to a relay service remaining applicable to all CPs; and
  - additional analysis of the costs and benefits of NGTR.
- 2.39 The 2012 Consultation also set out our proposals for the approval criteria, including KPIs, to be applied by Ofcom when considering the approval of NGTR services.

## **How Next Generation Text Relay could work**

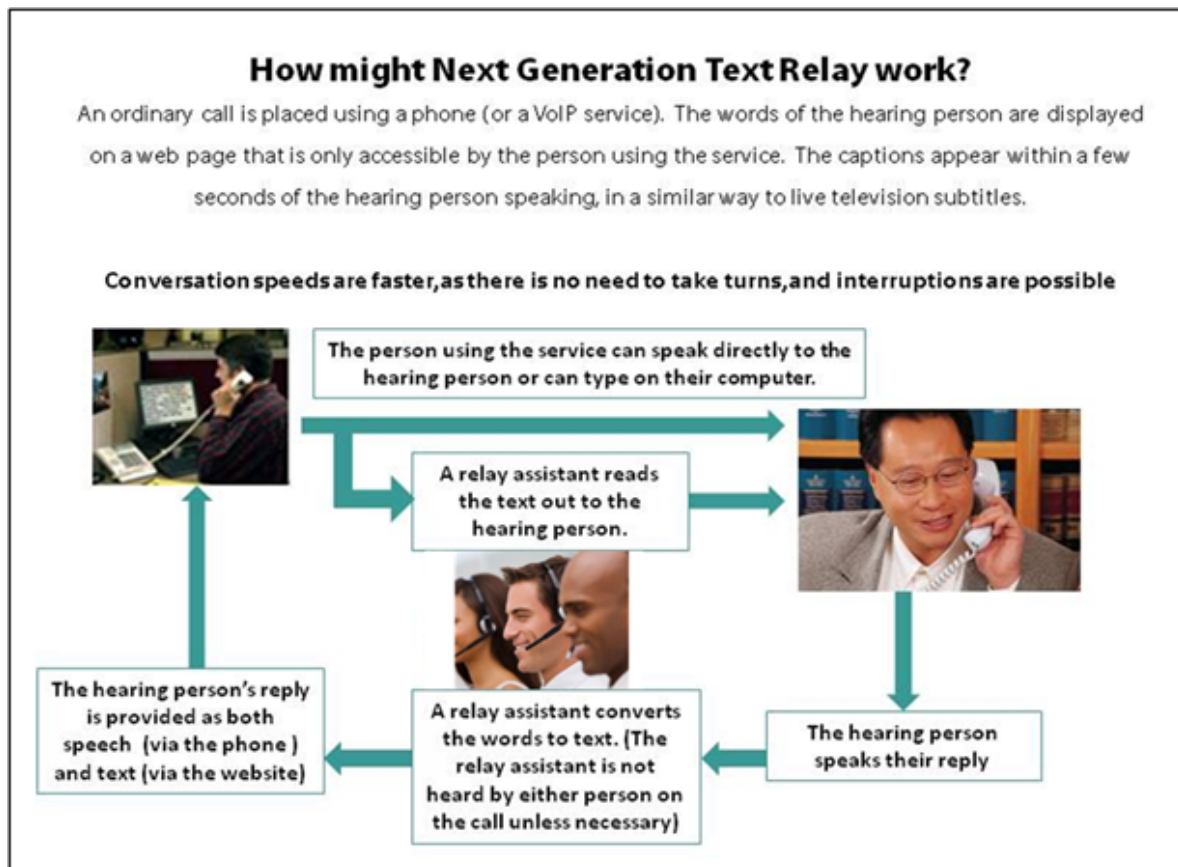
- 2.40 The service will need to provide the functional characteristics prescribed by new GC15.5<sup>18</sup>, including offering users flexibility in the choice of communications methods and equipment by being compatible with fixed and mobile telephony and compatible with a range of end user equipment including current textphones, PCs, laptops and smartphones.
- 2.41 The NGTR service will provide two-way text and two-way speech with live text for users, making use of internet-based access methods in conjunction with a telephone line (either fixed or mobile). The service is illustrated in Figure 2 below and the objective is for NGTR to 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.

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<sup>18</sup> See Annex 2.



Figure 2



- 2.42 Given the nature of the NGTR service, the hearing and/or speech impaired user will require access to a data connection. To take advantage of the new features of NGTR, therefore, the hearing and/or speech impaired user will need to make their own arrangements for internet access. This could be a fixed or mobile broadband connection and does not necessarily need to be taken out with the user's provider of voice telephony services (for instance, a user may have a phone line from one CP but use broadband provided by another). The user's ability to benefit from the improvements provided by NGTR will therefore be dependent on the availability of that data connection and, in the case of mobile broadband the ability to use the service will be dependent on the coverage and quality of the mobile data network in a given location. However, users of text relay without an internet connection will in practice be able to receive the existing level of service via text relay terminals<sup>19</sup>.
- 2.43 We commissioned three technical reports prepared by ICC<sup>20</sup>, which provided detail on elements of the technical characteristics of an NGTR service. As explained above, however, Ofcom is not mandating the detailed technical means of delivery for NGTR, as we consider industry to be best placed to effectively develop the platform.
- 2.44 NGTR will consist of a flexible platform that is capable of making use of data connectivity (fixed internet access or mobile broadband) in conjunction with a PSTN or mobile connection. This arrangement will 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 will be sent and received via an internet connection. Users of the service can be provided with access to the internet-based

<sup>19</sup> The continued provision of text-to-text functionality is discussed in Section 4.

<sup>20</sup> See Annex 6 of the 2011 Consultation and Annexes 6 and 7 of the 2012 Consultation.

elements of it through access to a website or via a mobile phone application (if available) on a smart phone, for which they will need a subscription to a fixed or mobile broadband internet connection. However, this does not preclude CPs choosing to implement NGTR in another way, if they so wish, as long as their solution meets the requirements of GC15.5 and the approval criteria. Ofcom is open to innovative methods of delivery and the objective is to ensure that NGTR can keep pace with technical developments.

- 2.45 To meet the requirement to provide access to an NGTR service for their subscribers (to make and receive calls), CPs will need to choose between: (i) developing and operating the service themselves (individually or collectively), or (ii) using an approved relay service run by another organisation.
- 2.46 There will need to be at least one NGTR service approved by Ofcom, with CPs connecting with this service to meet their obligations to provide access to their subscribers. 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,<sup>21</sup> although any service operator would also be free to seek approval for bespoke means of delivering NGTR. Either way, the service will need to meet the requirements of GC15.5 and the approval criteria. It will 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 will do<sup>22</sup>.
- 2.47 If a CP is to provide an NGTR service itself it will need access to a call centre and a flexible platform which allows two-way communication between a hearing and/or speech 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 calls<sup>23</sup>, whether soundproof booths are needed for relay assistants to ensure confidentiality of the NGTR service and the training needed for the relay assistants.
- 2.48 If a CP decides to provide their subscribers with access to a NGTR service operated by BT or another third party operator, it will need to make arrangements to interconnect with the relevant service. It will be a matter for the CPs concerned to determine the appropriate method of interconnection. As set out in ICC’s report,<sup>24</sup> one way of complying could be for a CP to 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 CP’s current systems, as it can use the 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.

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<sup>21</sup> See Annex 6 of the 2011 Consultation.

<sup>22</sup> See Section 3 of the 2011 Consultation.

<sup>23</sup> The expectation was that they would use their existing call centres.

<sup>24</sup> See Annex 7 of the 2012 Consultation.

- 2.49 Our decision is that outbound calls made by the hearing and/or speech impaired end user would continue to require the dialling of the prefix to initiate the relay service. However, the NGTR system must be capable of use by an incoming caller without the need to dial a prefix. ICC identified two options<sup>25</sup> by which the need for an incoming caller to dial a prefix could be removed:
- A user could be allocated another number from the number block already allocated to the relevant 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.
- 2.50 In respect of other relevant matters such as emergency calls, directory enquiries and billing, we do not expect there to be any changes required to the arrangements and processes CPs operate to meet their current obligations.

## Impact Assessment

- 2.51 The analysis presented in this document is intended to build on and complement the analysis contained in the 2011 Consultation and 2012 Consultation. Together that analysis represents an impact assessment, as defined in section 7 of the Act. In Sections 3 and 4 we set out our analysis and decisions on NGTR, including their impact on stakeholders.
- 2.52 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<sup>26</sup>.

## Equality Impact Assessment

- 2.53 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 apply<sup>27</sup>. 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 decision 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 decisions contained in this statement will have a detrimental impact on any particular group of people. Indeed, our decision furthers the interests of hearing and/or speech impaired users and these end users stand to benefit from any changes to relay services, which aim to ensure equivalence of access to voice telephony.

<sup>25</sup> See Annex 7 of the 2012 Consultation

<sup>26</sup> [http://stakeholders.intra.ofcom.local/binaries/consultations/better-policy-making/Better\\_Policy\\_Making.pdf](http://stakeholders.intra.ofcom.local/binaries/consultations/better-policy-making/Better_Policy_Making.pdf)

<sup>27</sup> Ofcom conducts equality impact assessments in order to fulfil its duties under section 149 of the Equality Act 2010.



## **Implementation process**

- 2.54 Annexes 2 and 3 set out the formal text of the notifications modifying GC15 and revoking USC4. These modifications take effect immediately on publication of this Statement. As explained in more detail in Section 4, paragraphs 4.124 – 4.128) CPs will be required to implement NGTR within 18 months following publication of this Statement.
- 2.55 It will also be necessary for Ofcom to approve the NGTR provider and the procedural steps are explained in detail in Section 4 (paragraph 4.138 and Figure 3).

## **Structure of this document**

- 2.56 The remainder of this document is structured as follows:
- Section 3 addresses the four issues relating to our assessment of the costs and benefits of NGTR that we consulted on in the 2012 Consultation.
  - Section 4 covers the implementation of NGTR including the drafting of GC15.5 and the approval criteria, as well as other issues which were the subject of the 2011 Consultation.
  - The annexes include the approval criteria and the formal notifications for the changes to GC15 and USC4.

## Section 3

# Next Generation Text Relay: the costs, benefits and use of a General Condition

3.1 This section addresses the following issues on which we consulted in the 2012 Consultation by reference to the consultation responses<sup>28</sup>:

- BT's costs of implementing/developing the NGTR platform;
- Imposing all relevant obligations by GC rather than some by USC, including the removal of the wholesale and cost orientation obligations on BT which would result from our proposed revocation of USC4;
- The incremental cost for third parties to provide access to BT's (or a third party's) NGTR service, including the costs of removing the prefix on incoming calls; and
- The importance and appropriateness of all CPs continuing to provide access to a text relay service and our additional analysis of the costs and benefits of NGTR to support our proposal to require fixed and mobile CPs to provide access to NGTR.

## Background/ Context

3.2 The 2011 Consultation set out our assessment of the incremental costs and benefits of implementing NGTR. The incremental benefit and incremental costs would be the additional benefits and costs that result from providing access to an NGTR service compared to those that exist under the current approved text relay service. 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 cost analysis was also based on the proposal that NGTR requirements should apply to fixed and mobile CPs.

3.3 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 £348,000<sup>29</sup>. 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, which is taken from the 2011 Consultation summarises the costs for these demand scenarios (i.e. in addition to the estimated £348,000 capital cost). On the left are ICC's estimates of the annual ongoing costs of NGTR. On the right are ICC's estimates of the incremental ongoing costs of NGTR (compared to the base case of the current text relay service at the current level of usage).

<sup>28</sup> Only responses not previously summarised in the 2012 Consultation are summarised in this statement.

<sup>29</sup> See Annex 6 of the 2011 Consultation.

**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 <sup>30</sup>    | 4.4                      | 400          | 0                                    | 0            |
| Medium <sup>31</sup> | 8.8                      | 641          | 4.4                                  | 241          |
| High <sup>32</sup>   | 23.7                     | 688          | 19.3                                 | 288          |

- 3.4 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 speech impaired individuals using an enhanced relay service; and broader social value - benefits to society more broadly from the availability of these services.
- 3.5 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 of access, 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.
- 3.6 We proposed that the requirement to provide access to an NGTR service would apply to all fixed and mobile CPs by means of a GC. We explained that this would represent a departure from the way in which 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).
- 3.7 Respondents to the 2011 Consultation raised a number of important and complex issues relating to the costs to industry and the benefits to disabled users of implementing NGTR, particularly as regards access by mobile providers. The 2012 Consultation summarised the responses to the 2011 Consultation which related to the cost-benefit analysis for NGTR. In light of these responses, we looked closely at the cost-benefit analysis set out in the 2011 Consultation, to ensure that our analysis took account of the relevant incremental costs to industry of introducing NGTR in accordance with our proposals, 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. The analysis supplemented our assessment of the costs and benefits of NGTR as set out in the 2011 Consultation and formed an integral part of our assessment of why we proposed that it was appropriate and proportionate to mandate the requirement of access to an NGTR service on all fixed and mobile CPs. We have carefully considered all of the responses to the 2012 Consultation (in addition to those received in response to the 2011 Consultation)

<sup>30</sup> **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.

<sup>31</sup> **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.

<sup>32</sup> **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.

and, at the suggestion of a number of industry stakeholders, hosted a technical workshop held by BT as a forum for CPs to discuss a number of technical matters arising out of the implementation of NGTR.

## Costs of implementing/developing the NGTR platform

### Our proposals

- 3.8 The 2012 Consultation set out details of BT's submission that ICC's estimate of costs had been considered in isolation from the implementation costs required and did not fully take into account the costs of developing the NGTR platform. In BT's view, a bespoke product is needed and NGTR should include functionality which allows text-to-text calls without the intervention of a relay assistant. BT considered that this functionality would reduce the long term operational costs of the relay service, despite higher upfront capital costs.
- 3.9 The 2011 Consultation included ICC's report which explored how NGTR could be delivered and the costs associated with delivering those improvements. 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. We made clear in the 2011 Consultation that we did not propose to mandate the detailed technical means of delivering NGTR. We considered that CPs would be best placed to ensure the most effective means of delivery of the functional criteria and requirements. This meant that CPs could choose to implement NGTR in a different way to those proposed by ICC as long as their solution met the requirements of GC15.5 and the approval criteria. We said it would also be open to CPs or relay service operators to provide a service exceeding the minimum requirements, as BT indicated its proposed NGTR service would do. Such flexibility would also enable industry to update the service as technological means become available, without Ofcom needing to change prescriptive rules.
- 3.10 The 2012 Consultation acknowledged that there are a number of different ways in which CPs could choose to implement NGTR to comply with our proposed requirements. We considered, however, that it is appropriate for our cost-benefit analysis to be based on a system configuration that would meet (but not exceed on a voluntary basis) our NGTR requirements and approval criteria at a minimum of cost.
- 3.11 We explained that the additional implementation/development costs highlighted in BT's response were the result of BT's commercial decision. We considered that although BT's plans to build functionality into the service that will allow direct text-to-text conversations would be likely to benefit hearing and/or speech impaired users,<sup>33</sup> this goes beyond the proposed minimum requirements for NGTR. We explained that Ofcom is required to ensure that disabled end users have access to telephony services equivalent to the level enjoyed by other end users, by proportionate means. We provisionally concluded 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 analysis<sup>34</sup>, 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.

<sup>33</sup> Indeed our research identified the ability to have private conversations (i.e. without the presence of a relay operator) as a particularly desirable feature.

<sup>34</sup> See Annex 6 of the 2011 Consultation.

## Stakeholder responses

### 3.12 In response to the 2012 Consultation:

- BT stated that its estimated costs for NGTR included the decision to build a bespoke platform that replicates the text-to-text functionality in use today, the need to ensure sufficient resilience for cross-network interoperability and emergency call support, planned testing, BT system integration and on-going customer care. BT stated that Ofcom's cost assessment did not include these additional service elements, which BT considered to be vital to delivering a robust and efficient solution. BT stated that the new text relay service must include text-to-text functionality as it provides benefits to users who want to have direct contact with the called party<sup>35</sup> without the presence of a third party relay assistant. It also provides efficient use of the relay service by avoiding the use (and cost) of a relay assistant when one is not needed.
- UKCoD/TAG and PhoneAbility commented that text-to-text calls were vital. UKCoD/TAG wanted the new service to continue to allow text-to-text calls via the relay platform to ensure text users can benefit from the rebate schemes and the call progress announcements the platform provides.

## Our response

3.13 BT's view is that Ofcom has understated the capital costs of developing a NGTR service. Further clarification has confirmed that the additional costs referred to by BT are attributable to BT wishing to develop a bespoke system going beyond the minimum requirements of our proposals, including by maintaining text-to-text functionality in the service.

3.14 Pursuant to the rules currently in force (USC4 and GC15.3), BT is required to fund, and all CPs are required to provide, access to a "relay service". That service is defined, in both the USC and GC15 as a service that provides facilities

"for the receipt and translation of voice messages into text and the conveyance of that text to the terminal of customers of any provider of Publicly Available Telephone Services and vice versa".

3.15 That wording mirrors the wording of the Order. Ofcom's proposals for NGTR are consistent with that position; namely that the relay service must be capable of converting voice to text and text to voice. It is not a requirement of the existing service, nor is it part of Ofcom's proposals for NGTR, that the relay service must be capable of delivering text-to-text communications. BT has taken a commercial decision to provide a text-to-text facility in the current text relay service and plans to do the same for NGTR. As we explain below in Section 4, our objective is to secure equivalence of access for disabled end users to voice telephony services. That is about the ability to make end to end voice calls, the most basic telephony service, but by different means (using the medium of the relay services). Our view is that this objective can be achieved for hearing and/or speech impaired end users generally by services that provide voice to text and text to voice conversion. We have found that such a service is required to secure equivalence of access.

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<sup>35</sup> Although BT considered that more businesses and organisations needed to publish numbers so a user can utilise text-to-text communications.

- 3.16 In order to make a text-to-text call both the caller and recipient must have access to a textphone. The main use of text-to-text communication is therefore to allow two hearing and/or speech impaired users to communicate directly with each other. We acknowledge, however, BT's point that it can also be used if a business or organisations has a number for text-to-text communications. Whilst we recognise that some text relay users are likely to benefit from the ability to make text-to-text calls, our understanding based on the research conducted in the course of our review is that many more users make use of and favour different forms of communication for text-based communications. For example, the Opinion Leader research found that of the 172 deaf or partially deaf respondents who communicate with friends and family who are deaf, partially deaf or have speech difficulties, 76% use email and 64% use SMS, while only 22% communicate using text-to-text communication via text relay<sup>36</sup>. The evidence we have considered indicates that, whilst text-to-voice functionality (and vice versa) is necessary to secure equivalence, text-to-text functionality (having regard to the prevalence of alternative forms of text based communication such as email, SMS and instant messaging) is not. On that basis we do not consider that the upfront costs associated with text-to-text functionality are part of the relevant costs that we need to consider for the purpose of our regulatory decision.
- 3.17 In any event, we do recognise that text-to-text functionality might be beneficial for the relay provider in reducing operating costs (to the extent that it avoids the need for the presence, and therefore cost of, a relay assistant). However, as explained by BT in its response to the 2012 Consultation, building this functionality into an NGTR service requires additional upfront capital costs. It therefore involves a commercial decision based on the balance of upfront and ongoing costs. We consider that a relay provider's decision to offer text-to-text calls as part of a NGTR service is a commercial one and involves making a judgement about whether the volume of relay calls switching to text-to-text is likely to be sufficient to make the resulting savings in operating costs greater than the increase in capital costs needed to implement text-to-text functionality. If the overall costs (i.e. the present value of all capital and operating costs) of a NGTR service with text-to-text functionality are indeed lower than one without, the implication is that our 2012 Consultation assessment overstated the minimum cost of an NGTR service. If this is the case, we are satisfied that our provisional conclusion, that implementing NGTR will confer benefits to disabled end users that are likely to outweigh the costs to CPs.
- 3.18 Next we consider the additional service elements that BT considers we have not taken into account in our cost assessment. On this point, we maintain our position in the 2012 Consultation which is that Ofcom's duty to ensure equivalence of access by proportionate means requires us to base a cost benefit analysis on a system configuration that would meet (but not exceed) our NGTR requirements at a minimum of cost. We consider that the "off-the-shelf" system configuration identified by ICC meets this criterion<sup>37</sup>. The design of BT's NGTR service, or another relay provider's NGTR service may well differ from ICC's configuration. Indeed, we encourage relay providers to exercise their commercial judgement in designing an NGTR service that includes any additional service elements they consider important for the effective running of their service.
- 3.19 In conclusion, based on the reasoning set out in the 2012 Consultation and in light of our consideration of stakeholders' responses:

<sup>36</sup> 2011 Opinion Leader questionnaire, data tables, page 53.

<sup>37</sup> ICC estimated that at the level of current demand, the incremental capital costs of NGTR would be £348,000 and the ongoing costs would be the same as the current text relay service provided by BT.

- i) We consider that although text-to-text communication may offer some benefits to users and relay providers, text-to-text functionality is not a feature required as part of the regulatory requirements of NGTR. We have therefore made no changes to the GC or approval criteria in relation to text-to-text.
- ii) We maintain our provisional conclusion that our assessment of incremental costs in the 2011 Consultation accurately estimated the incremental costs (for BT) of implementing a NGTR service that would meet the minimum requirements of GC15.5 and our approval criteria at a minimum of cost.

## Using Universal Service or General Conditions

### Our proposals

- 3.20 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. The 2011 Consultation proposed, by way of implementation, the revocation of USC4 in favour of relying solely on GC15.3 to require all CPs to provide access to a text relay service.
- 3.21 In the 2012 Consultation we presented further analysis which considered certain implications of the revocation of USC4 in favour of implementation by way of GC alone. In particular, in the 2012 Consultation, we addressed concerns raised by stakeholders regarding:
- 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 price it charges other CPs for using its relay service.
- 3.22 Each of these issues is addressed in turn below.

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

- 3.23 In the 2012 Consultation we set out that BT will incur capital costs setting up its NGTR service and will incur ongoing costs, both fixed and variable, in its day to day running of the service. Under our proposal to implement the NGTR requirement by means of GCs on all CPs, the amount that can be charged by BT will depend on whether it is supplying NGTR on a retail or a wholesale basis in a given instance:
- When supplying NGTR directly to end users (retail), BT will be constrained to charging the cost of a normal voice call. We explained that in practice this will not cover the operating costs of NGTR.
  - When supplying NGTR to other CPs (wholesale), BT will be able to set a price to that CP that will allow it to cover its operating costs and contribute to its capital costs<sup>38</sup>.
- 3.24 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 to develop their

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<sup>38</sup> The CP then supplying access to the relay service for its customers is itself then only permitted to charge the cost of an ordinary call.



own approved NGTR services. The 2012 Consultation, based on ICC's report<sup>39</sup>, set out the estimated capital costs that other CPs would face should they set up an NGTR service would not be significantly different from its estimate of the costs faced by BT. ICC estimated that capital costs would be between £182,000 and £333,000, (depending on traffic volume and factoring in accommodation, training of staff and testing of systems) and estimated that the costs incurred would likely relate to modifying a call centre. ICC estimated that 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).

- 3.25 We considered that likely outcomes should CPs decide not to purchase BT's service would be:
- 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; or
  - several CPs would collectively set up an approved NGTR service to allow them to achieve sufficient volumes of traffic.
- 3.26 On this basis, we consulted on the view that BT would have an incentive to supply its NGTR service on a wholesale basis to other CPs as widely as possible. We explained our view that this would allow BT to earn wholesale revenues which it could offset against its ongoing costs and capital costs (which it cannot do when supplying directly to retail customers) and BT has confirmed that it intends to supply NGTR to other CPs on commercial terms. We explained that a decision by other CPs not to purchase BT's service would have a negative financial impact on BT, and that we expected this to place a constraint on BT's wholesale prices. This is discussed further below.

### The removal of the cost orientation obligation on BT

- 3.27 We explained in the 2012 Consultation that under the GC method of implementation, and following the revocation of USC4, 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 on which other CPs may acquire wholesale access<sup>40</sup>.
- 3.28 We explained that the legal position as regards the imposition of wholesale obligations by way of USCs has been clarified by the European Court of Justice in *The Number* case<sup>41</sup>. In that case, the Court confirmed that the specific obligations that may be imposed on undertakings by way of USCs pursuant to the Universal Service Directive are to be interpreted strictly. The Court held that USCs imposed on designated universal service providers can only include specific obligations relating

<sup>39</sup> See Annex 6 of the 2012 Consultation

<sup>40</sup> 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.

<sup>41</sup> 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>)



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.

- 3.29 Therefore, we explained that 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 consultation responses would not be possible.

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

- 3.30 The 2012 Consultation set out that 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 ongoing costs of providing the service.

- 3.31 We explained our view that 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<sup>42</sup>. We estimated the likely financial impact of a range of potential price increases by BT. For example, we estimated 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 £1.15 million per annum, depending on the level of the price increase and the volume of traffic originating from other CPs.

- 3.32 We also considered the likely incremental costs CPs would face over five years (a time period over which we considered a CP might make investment decisions)<sup>43</sup>. Assuming, (i) that total relay volumes and operating costs remain at current levels, and (ii) that the split of traffic originating from CPs remains constant over five years, a 15% price increase would mean that a CP which accounted for 40% of the minutes wholesaled by BT to other CPs would pay 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) based on current usage.

- 3.33 We considered two likely constraints on BT's pricing for its supply of an NGTR service on a wholesale basis:

- The potential for either (a) a CP acting unilaterally, (b) a number of CPs acting collectively, or (c) a third party setting up a rival NGTR service; and
- Regulatory constraints.

- 3.34 The 2012 Consultation compared the likely set up costs of a rival NGTR service with the additional costs CPs would incur should they continue to connect to BT's NGTR service in the face of price rises. We estimated that in principle a CP originating

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<sup>42</sup> For clarity, we mean the cost of providing the NGTR service and not any profit/loss made by BT in providing the relay service.

<sup>43</sup> We 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](http://www.hm-treasury.gov.uk/d/green_book_complete.pdf)

750,000<sup>44</sup> minutes per year and facing an increase in BT's wholesale price of 30% would have an incentive to set up an alternative rival NGTR service. For CPs originating lower volumes of relay traffic, the impact of a price increase by BT would naturally be smaller. Also 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.

- 3.35 In terms of regulatory constraints, we also explained that 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.
- 3.36 We consulted on our provisional conclusions that the additional costs to industry arising from the removal of USC4 on BT are therefore likely to be limited as:
- The ability to recover ongoing costs and contribute to capital costs offered by the wholesale route provided 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 wished to set up another approved NGTR service they would be 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).<sup>45</sup> 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<sup>46</sup>. We considered 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.

## Stakeholder Responses

- 3.37 Several respondents to the 2011 and 2012 Consultations raised further concerns with our proposal to rely solely on a GC for the provision of relay services and to revoke USC4:
- Sorenson Communications (Sorenson) stated that reliance on a GC alone would mean that CPs would seek to drive down costs by attempting to limit the number of customers using the service, as well as limiting their own investment, to the detriment of the UK's Deaf community.
  - Several disability stakeholders (Action on Hearing Loss, TAG, Sense and PhoneAbility) recommended that the USC be kept in place until the new service was ready to roll out to avoid any loss of service for users. UKCoD<sup>47</sup>/TAG, Sense

<sup>44</sup> In paragraph 3.43 of the 2012 Consultation, we stated that "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". The figure of 75,000 quoted for the volume of relay calls should have read 750,000.

<sup>45</sup> See Annex 6 of the 2012 Consultation.

<sup>46</sup> For clarity, we mean the cost of providing the NGTR service and not any profit/loss made by BT in providing the relay service.

<sup>47</sup> UK Council on Deafness

and PhoneAbility, in response to the 2012 Consultation, sought clarification over the legal position of using a GC only, what the term “access” meant in the proposed GC15.5 and how the provision of at least one relay service provider could be guaranteed without the current USC4 requirement to fund the service.

- The Federation of Communication Services (FCS), representing smaller CPs, also raised concerns over how the provision of at least one relay service provider could be guaranteed.
- Several disability stakeholders (including Action on Hearing Loss, Hearing Link, UKCoD, BDA<sup>48</sup>, Sense, TAG, DAART<sup>49</sup> and NDCS<sup>50</sup>) raised concerns that the new arrangements should not put at risk the availability of a relay service from all providers and at the same time should maximise the scope for competitive delivery of relay services. They felt that the lack of competition between relay service providers would limit consumer choice and hinder innovation and future developments of the NGTR service. They recommended that the implementation of the requirement to provide NGTR should ensure that users have access to a choice of relay provider. In response to the 2012 Consultation, several disability stakeholders repeated the concerns they had raised in response to the 2011 Consultation, for example, UKCoD/TAG and NDCS raised concerns that the current situation would remain with BT being the only provider of relay services with no incentive to develop beyond a minimum level, provide customer focussed service improvements or long-term investment.
- Sorenson and SignHealth (relay providers) also felt competition between multiple relay service providers was important. Sorenson cautioned that the possibility of a competitive service depended largely on the implementation route, GCs or a USC, chosen by Ofcom. They argued that Ofcom should assess various means of structuring the GC or USC route to allow a competitive relay market.
- NDCS and Hearing Link argued that a funding mechanism was required to ensure that various organisations could compete to provide this type of service. DAART, TAG, UKCoD, PhoneAbility, Sense and BDA recommended that NGTR be delivered by a fund (voluntary or mandated) with industry and government contributions due to the wider social and economic benefits. DAART stated that a funding formula linked to the revenues of the telecoms industry would ‘promote a business model where providers are adequately rewarded for the development of several relay services to meet the wide spectrum of needs within the deaf and hard of hearing sector’. BDA recommended that a low cost centralised organisation be established to administer the NGTR budget. In response to the 2012 Consultation, NDCS and DAART repeated the comments raised in response to the 2011 Consultation on funding.

3.38 In general, CPs responding to the 2012 Consultation still had some concerns over the potential costs of having to provide access to the NGTR service for their customers. These related to the cost of CPs commissioning their own relay service, the potential wholesale costs and the monitoring in place to ensure wholesale prices remain proportionate:

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<sup>48</sup> British Deaf Association

<sup>49</sup> Deaf Access to Alternative Relay in Telecommunications

<sup>50</sup> National Deaf Children’s Society

- UCKTA<sup>51</sup>, FCS, Sky and CWW<sup>52</sup> did not consider CPs commissioning their own relay service to be a realistic or proportionate option, particularly for smaller CPs, and felt the only realistic option was to use the BT service. UKCTA, CWW and Sky were concerned that only BT would develop an NGTR service on a wholesale basis and that other CPs would effectively be required to purchase a service that goes beyond what is required to comply with the revised GC15. Sky recommended that any costs associated with the NGTR service should be monitored by Ofcom to ensure they do not become disproportionate to their stated objective.
- FCS and UKCTA raised concerns that the cost of NGTR may not be proportionate if wholesale prices become excessive. FCS did not agree that market forces would drive BT's prices down. UKCTA was concerned over the potential costs of NGTR especially as BT's estimated costs exceeded those consulted on by Ofcom due to BT intending to go beyond the minimum requirements of GC15.5 (which could lead to higher costs and demand for the service than Ofcom has estimated), the recent 30% price rise for the current service, the higher KPIs and the unknown demand. UKCTA did not see how Ofcom could conclude that it is a proportionate and non-discriminatory intervention without a wholesale charging cap in place. CWW also expressed concerns about BT's wholesale charges.
- The Mobile Broadband Group (MBG) considered that Ofcom should review the costs considering the uncertainty over demand for the new relay service. MBG stated that if demand far exceeds expectations, Ofcom must review the funding model to avoid the risk of a disproportionate burden being placed on CPs.
- FCS also considered that as CPs are unable to charge a premium for calls made via the text relay service, it would simplify the billing process if BT (or any other relay provider) reflected the price to be charged to the end user by the CP.

## Our response

- 3.39 As set out in paragraphs 3.71 – 3.88 below, Ofcom and the majority of stakeholders consider that it is important for disabled end users to have a choice of CP so that they can take advantage of the dynamic and competitive communications market that exists in the UK today. For the reasons set out below, following careful consideration of all consultation responses and in line with the analysis conducted in our two consultations, we have decided that it is appropriate to proceed with our proposed means of implementation. We remain of the view that it is appropriate to require all fixed and mobile CPs to provide access to NGTR for their customers by way of GC and that it is not necessary or appropriate to continue to require BT to fund the relay service and/or provide wholesale access to other CPs on cost-orientated terms by way of a USC (indeed, for the reasons explained above at paragraph 3.27 it would not be legally possible for us to do so).
- 3.40 We consider that reliance solely on a GC will not affect the security of text relay provision. GC15.3 already requires, and will continue to require, all CPs to provide access to a text relay service. We have reflected this obligation in the definition of "relay services" in the wording of new GC15.5. This now makes it clear that, until Ofcom has approved a NGTR service, CPs are required to provide access to the existing approved relay service. In order to comply with the obligation to provide

<sup>51</sup> United Kingdom Competitive Telecommunication Association

<sup>52</sup> Cable & Wireless Worldwide

access to a NGTR service, CPs will need to ensure that there is at least one text relay provider in place, either by providing a relay service themselves or by interconnecting to another approved relay service. As BT has committed to provide the current text relay service until its NGTR service is approved and will offer its NGTR service on a commercial wholesale basis, CPs will not be prevented from complying with the requirements of the GC and users of relay services will have an uninterrupted service. Unless CPs (who currently interconnect to BT's text relay service) have made other arrangements, once BT's NGTR service is approved CPs will interconnect with the NGTR service in order to remain compliant with GC15.3.

- 3.41 As regards the suggestion from stakeholders that Ofcom should investigate alternative means of funding a relay service, including by means of a fund relying on industry and government contributions, Ofcom does not have such wide ranging powers to require such a fund. There are specific provisions in the Act for Ofcom to review the financial burden on a universal service provider arising from one or more universal service conditions imposed upon it and to determine whether it would be fair or unfair for the universal service provider to bear or continue to bear that burden<sup>53</sup>. If, following such a review, Ofcom concluded that it would be unfair for the universal service provider to bear some or all of the financial burden identified, Ofcom then has the power to determine that financial contributions be made by CPs to whom GCs apply for meeting that burden. Ofcom does not have more general powers to set up a fund upon which potentially competing relay service providers can draw to operate a service as compensation can only be to universal service providers. Nor can Ofcom manage funds more widely from industry and/or government as contributions can only be ordered from CPs to whom GCs apply. Under our proposals for NGTR, a relay service provider will have the ability (but not the obligation) to provide a wholesale service to other CPs. As explained above, it will be able to provide that service on commercial terms which will allow it to recover an amount of its capital and ongoing costs from CPs in proportion to the amount of use that each CP makes of the service. This also allows competing relay providers to enter the market which would be less likely in the event of single universal service provider being funded to operate the relay service.
- 3.42 Some disability stakeholders expressed a desire for Ofcom to establish a competitive model for providing a choice of relay provider to ensure the relay service meets changing user needs and takes account of evolving technology. The Directive gives regulators the power, via national implementing legislation, to ensure that disabled users of telephony services are able to take advantage of the choice of providers and services that are available to the majority of end users<sup>54</sup>. That does not necessarily extend to the choice of relay service providers.
- 3.43 Rather, in line with our powers and as explained in more detail below, one of the policy objectives of Ofcom's review of relay services has been to ensure that hearing and/or speech impaired users are able to access a relay service using any CP that they choose, whether fixed or mobile. This ensures that such users can take advantage of the competitive and dynamic communications market that exists in the UK today, including competitive pricing and bundled packages of TV, broadband and voice services. The GC method of implementation will enable multiple relay service providers to become approved by Ofcom and offer services to users. The approval criteria and KPIs (see further below) are intended to ensure minimum standards of service provision.

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<sup>53</sup> Sections 70 – 72 Communications Act 2003

<sup>54</sup> See Article 7(2) and Article 23a of the Directive.

- 3.44 Against this backdrop we keep in mind that Ofcom is required to secure equivalence of access for disabled end users in the least onerous manner available. We have adopted an approach that would enable, but not require, choice of relay providers. We do not consider that it would be an appropriate or proportionate intervention to require industry to develop of a competitive model of relay services, nor would this be consistent with our powers. This would represent, even assuming it was within Ofcom's powers, a significant departure from the current position and could potentially result in significant costs being incurred by industry beyond those contemplated in our proposals.
- 3.45 In relation to wholesale requirements and/or pricing obligations of the type proposed by some stakeholders in their responses as set out in the 2012 Consultation, wholesale obligations, including price controls, cannot be imposed by way of a universal service condition. There is, similarly, no legal power to impose a price control of the sort requested by some CPs in the amended General Condition. We would note for completeness that GC18.5, relating to number portability, contains a form of cost-orientation obligation, as does GC19.3, relating to the provision of directory information. In both cases, however, there is a specific legal requirement on Ofcom to impose such a condition, emanating from the Directive (Articles 30(2) and 25(2) of the Directive, respectively)<sup>55</sup>. No such requirement exists in the case of services designed to secure equivalence of access for disabled end users, such as relay services, and Ofcom does not therefore have the power to impose a price control of the sort requested. Therefore, any service offered by BT, or indeed a third party relay provider, will not be subject to price caps or ex ante price controls<sup>56</sup>.
- 3.46 With regard to the comments by FCS in respect of billing data records, FCS may take this issue forward with BT and as appropriate with industry's Metering and Billing consultative body<sup>57</sup>.
- 3.47 We therefore affirm the provisional conclusions set out in the 2012 Consultation (and above at paragraph 3.36) that the additional costs to industry arising from the removal of USC4 are likely to be limited as:
- An increase in BT's access charges would not, in itself, increase the industry-wide cost of providing NGTR. However, it would serve to redistribute those costs, with less of the costs being borne by BT and more by other CPs<sup>58</sup>. 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.
  - BT has confirmed its intention to supply NGTR to other CPs on commercial terms and the ability to recover ongoing costs and to contribute to capital costs will provide BT with an incentive to continue providing other CPs with access to its relay service.

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<sup>55</sup> We would note for completeness that Ofcom does have powers to impose price controls in appropriate circumstances following its market review process carried out under the EU framework and following a finding of Significant Market Power.

<sup>56</sup> 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.

<sup>57</sup> <http://www.mababf.org/>

<sup>58</sup> For clarity, we mean the cost of providing the NGTR service and not any profit/loss made by BT in providing the relay service.

- If CPs wish to set up another approved NGTR service they are free to do so, albeit that this will come at some cost.
- CPs with smaller volumes of relay traffic will not face a large cost burden if BT raises its charges. In the 2012 Consultation, we illustrated this by setting out in paragraph 3.37 our estimate that a 15% increase in BT's wholesale price would, for example, cost all mobile providers in combination less than £50,000 over five years (if demand stays constant). On 1 June 2012, BT increased the usage price it charges other CPs for its current text relay service by £0.20 (approximately 30%) to £0.89 per minute. Based on the same methodology used in the 2012 Consultation, we have estimated that this increase in BT's wholesale price will have only a modest impact on the costs mobile providers, again for example, will incur from providing access to BT's relay service. The increase of £0.20 will cost all such providers in combination an additional £80,000 over five years, and a further 15% increase on this price level (i.e. from £0.89 to £1.02), would lead to an additional £48,000 of costs over the same period.

3.48 We recognise that dramatically increased take-up and usage could change our assessment relating to the unrestricted provision of these services. We will monitor the ongoing costs of the service for CPs and would consider the case for further intervention in appropriate circumstances. We would expect such a review to consider the case for making further proposals on the NGTR service, such as on methods for restricting use or the availability of the service.

3.49 Likewise, we have decided to adopt our proposals to revoke USC4 and impose obligations on CPs by GC only for these reasons (some of which were explained in more detail in our consultation documents):

- The law does not allow Ofcom to maintain wholesale obligations in USC4 anyway;
- There are limited additional costs to industry, as set out above;
- It is appropriate to impose obligations on CPs under GC15 to give relevant end users the benefit of choice and competition in the UK communications market (see further below); and
- In light of the above, our regulatory objectives can be appropriately achieved by way of GC15 only, and USC4 is, accordingly, an unnecessary regulatory burden that Ofcom should remove.

## **The incremental cost for third parties to provide access to the NGTR service, including the costs to industry of removing the prefix on incoming calls**

### **Our proposals**

3.50 In this section we consider the responses to our provisional conclusions in the 2012 Consultation on the additional costs to be taken into account in our cost-benefit analysis, and the effects of those costs, in relation to: (i) CPs' costs of setting up interconnection with NGTR, (ii) the steps that mobile providers would need to take to integrate with NGTR, and (iii) the costs to industry of removing the prefix for incoming calls to the relay service.

### CPs' costs of setting up interconnection with NGTR

- 3.51 Following the 2011 Consultation, some respondents queried whether our cost/benefit analysis took account of the costs to providers of setting up an interconnection with the NGTR service (assuming that they are not themselves providing a relay service). We agreed that these costs were important and commissioned ICC to carry out further analysis. The 2012 Consultation set out details of ICC's analysis of the potential costs of requiring all CPs to give access to an NGTR service to their customers and any likely difference in costs of provisions between mobile and other fixed line providers<sup>59</sup>.
- 3.52 The ICC report set out that if BT continues to handle all text relay traffic no new interconnection links would be required. Nor would there be additional capital costs for CPs compared to those incurred in connection with the existing text relay service. If a third party sets up another approved NGTR service, ICC reported that CPs could connect via existing interconnection links or could transit this traffic via BT. ICC considered that the incremental call volume generated by an NGTR platform, on the basis of Ofcom's demand scenarios, should not be sufficiently significant to require additional interconnection capacity. But ICC considered that if additional interconnection capacity were required in either of the above scenarios, the additional costs incurred would be minimal. ICC did not identify any significant differences between fixed line and mobile providers interconnecting with the relay service in this regard.
- 3.53 We therefore consulted on our provisional view that CPs were unlikely to incur additional interconnection costs as a result of the implementation of NGTR, and that, 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.

### The steps mobile providers will need to take to integrate with an NGTR platform

- 3.54 Following the 2011 Consultation there was concern expressed by some CPs over the level of technical detail Ofcom had provided about NGTR, and therefore over their ability to estimate the implementation costs for this system. We asked ICC<sup>60</sup> to examine the technological steps that fixed and mobile providers would need to take to connect to an NGTR service. ICC considered various options and found no difference between fixed and mobile providers in respect of interconnection to an NGTR service. However, ICC indicated that mobile providers are unlikely to have direct interconnection with a third party service provider (should such a service exist) due to small volumes of traffic. In such cases, ICC suggested that mobile providers would use BT as a transit operator should they need to connect with a third party NGTR service. We shared ICC's report with the four mobile network operators ("MNOs": Vodafone, Telefónica, Everything Everywhere, and Three) and sought further information from them using our statutory information gathering powers on their expected costs of interconnecting with an NGTR service. One MNO agreed that interconnection costs would remain low, while another stated that it would probably seek to interconnect with any NGTR service via existing interconnect links, or via BT. We set out these points in the 2012 Consultation.
- 3.55 Additionally, we explained in the 2012 Consultation why we expected that mobile operators, in providing NGTR functionality, would not face significant capital costs.

<sup>59</sup> See Annex 7 of the 2012 Consultation.

<sup>60</sup> See Annex 7 of the 2012 Consultation.



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 device which has internet access. This will represent a modest increase in IP traffic, which we did not anticipate would require additional capacity. The voice component of the telephone call will be carried on the network like any other voice call and will represent a modest increase in voice traffic on networks. Again we did not anticipate that this would be likely to increase costs significantly.

- 3.56 Our provisional view on which we consulted was that there were 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, we explained that they are likely to be spread over the lifetime of the service.

### Removal of the requirement to dial a prefix for incoming calls to a relay user

- 3.57 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 need to dial a prefix as part of our proposals for NGTR. The 2011 Consultation did not specify whether the removal of the prefix applied to calls made by a hearing and/or speech impaired user (outgoing calls), hearing user (incoming calls), or both.
- 3.58 Whilst a number of stakeholders supported the removal of the dialling prefix to access the relay service, clarification was sought in relation to how this would actually be implemented and whether it would apply to both ingoing and outgoing calls. In addition, a number of technical and practical issues were raised by respondents in relation to the removal of a prefix for outgoing calls using the relay service.
- 3.59 In light of the consultation responses, we considered this issue further in the 2012 Consultation. We clarified that our proposal to remove 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. The basis for our view was that the need for a prefix goes to equivalence of access. An inability to make calls without a prefix may inhibit the making of such calls. Taking into account the technical difficulties and the limited adverse effect of disabled end-users' need to dial a prefix to make outgoing calls, we modified our proposal in this way. We asked ICC<sup>61</sup> to explore the options for implementing the removal of the dialling prefix and any costs associated with such options.
- 3.60 ICC noted that the telephone network needs a way to identify that the call is destined for a user who needs to use a relay service and so must be diverted via the text relay platform operator. ICC identified two options to remove the need to dial the prefix for incoming calls. One option was to use a number within the number block already allocated to the relevant network operator, which would need to be forwarded to the relay platform based on a look-up table. The other, seemingly more technically straightforward and cheaper, was to allocate new number codes or blocks (such as those in the 03 or 07 ranges) to the text relay service<sup>62</sup> which would then be routed directly by the originating CP, without a look-up, to the appropriate relay service. The

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<sup>61</sup> See Annex 7 of the 2012 Consultation.

<sup>62</sup> Under numbering scheme rules, the code or block would need to be allocated to a CP and sub allocated to the relay service(s).

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

- 3.61 This latter option would require the allocation of an additional telephone number to the user of the relay service, from a number range allocated to the relay provider. Customers would also retain their current telephone number, so that voice calls which do not require the relay service could continue to be received in the usual way<sup>63</sup>. ICC stated that on the basis of this option for prefix removal there would be no additional cost to CPs. Therefore the provisional view on which we consulted was that costs associated with the requirement to remove the prefix for incoming calls to the relay service would be limited.
- 3.62 During the 2012 Consultation period, we hosted a technical workshop with CPs to discuss a number of issues, including those surrounding the removal of the prefix for incoming calls and to further inform CPs of the likely technical steps and costs involved in light of the ICC report.
- 3.63 The following key points arose at the workshop:
- Of the options considered by ICC, CPs preferred the method where the relay service would centrally manage 03 and 07 number blocks which can be requested by an end user through a self-provision system from the line requiring the number.
  - BT considered that the 1800 prefix should also continue to be available to users, as some text relay users may wish to receive calls on a number which is not registered with the text relay service, or may not wish to take a second number.
  - The 03 and 07 number blocks allocated to the relay service would require CPs to update their systems (including billing systems) to recognise that these blocks are allocated to the relay service. However this would be no different from what happens now when number blocks are allocated.
  - Where a user changed CP (and/or potentially relay provider, if there is more than one) they should be able to retain their allocated relay number. Otherwise they would need to request a new number from the text relay number block.
  - Where an 07 number is allocated to a relay user for incoming calls, third parties may assume this is a normal mobile number and send an SMS message to the number. The group considered how these messages could be relayed to the text relay user or how the sending party could be notified that the number should be used for voice calls only.
  - If more than one relay operator was approved and each with allocated 03 and 07 number blocks they would need to liaise with each other on the use of the numbers.

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<sup>63</sup> This would be particularly useful for mixed user households.

## Stakeholder responses

### CPs' costs of setting up interconnection with NGTR and the steps mobile providers will need to take to integrate with an NGTR platform

3.64 The responses to the 2012 Consultation did not comment further on interconnection /integration in relation to (i) CPs' costs of setting up interconnection with NGTR, and (ii) the steps needed to integrate with NGTR.

### Removal of the requirement to dial a prefix for incoming calls to a relay user

3.65 All respondents to the 2012 Consultation agreed in principle that the requirement to dial a prefix for incoming calls to hearing and/or speech impaired users should be removed. However some concerns were raised:

- Several disability stakeholders (DAART, UKCoD/TAG and Action on Hearing Loss) and Reach 112 also wanted the need to dial a prefix for outgoing calls to be removed and asked Ofcom to investigate how this could be achieved.
- In relation to the prefix removal for incoming calls, UKCoD/TAG considered that any registration must be as easy as the current emergency SMS registration, that end users should be able to port their 03 or 07 relay number if they switch CP and raised concerns that "03" numbers do not look like standard residential numbers and might give the appearance of being owned by a business.
- The MBG and FCS supported the removal of the prefix as long as the cost of doing so was proportionate. UKCTA raised concerns over the potential for customer confusion and recommended Ofcom consulted to ensure this feature was understood and accepted by end users. MBG raised concerns over the issue of texts being sent to 07 relay numbers and considered that if text messages could not be relayed to the text relay user then it would not be appropriate to use 07 numbers in order to avoid customer annoyance and confusion.
- BT felt that users should have the choice of continuing to require people calling them to use the 1800 prefix to initiate the relay service or moving to 03 or 07 text relay numbers. BT stated that retaining the current prefix as a default would allow a user to still receive calls even if they were not using their registered number.
- As discussed at the workshop, BT considered that the simplest way to enable the optional removal of the incoming call prefix was to allocate blocks of 03 and 07 phone numbers to each approved relay service for use as relay numbers. The benefits of this approach included: a simple registration process<sup>64</sup>, automatic identification for routing by telephone networks, that both legacy and new equipment was supported, the system could be managed centrally and it allowed users to keep this number if they moved CP as the 03 or 07 number would be tied to their standard phone number.

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<sup>64</sup> BT suggested that registration could be done automatically with an 03 or 07 number overlaid on to the standard phone number flagging those calls which need to be made via the relay service. This allows the end user to receive standard voice calls or calls via the relay service depending on the number provided to the incoming dialer. One call to the relay provider helpdesk from the phone number the user wants to receive relay calls on could allow an automated system to allocate the relay number for that standard number to the user. Users with more than one phone number, e.g. a fixed line and mobile, could have a unique relay number for each number.

## Our response

### CPs' costs of interconnection with NGTR and the steps needed to integrate with NGTR

3.66 In light of discussions between CPs at the technical workshop, and in the absence of further specific comments in response to our 2012 consultation, we remain of the view 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 so required the additional cost will be relatively limited. Similarly, mobile providers are unlikely to need to incur significant costs to integrate their systems with the NGTR platform.

### Removal of the requirement to dial a prefix for calls to a hearing/speech-impaired user

3.67 The technical work presented in the 2012 Consultation and the discussions held with industry in the technical workshop sought to establish whether there was a technological means of removing the requirement to dial a prefix for incoming calls to a relay service, and whether this could be achieved in a proportionate manner, particularly as regards the associated costs. Whilst consistent with our broader approach to the NGTR service, we do not consider that it would be appropriate for Ofcom to mandate the particular solution to be adopted by industry. However, it is necessary for us to be satisfied that a technically practicable, workable and cost-effective solution is available. No further options were proposed by respondents to the consultations.

3.68 As regards disability stakeholders comments that the outgoing 1800 prefix should also be removed, at this stage we consider it appropriate to only remove the incoming prefix. Our consultations and research<sup>65</sup> did consider removing the prefix for outgoing calls. It was evident however, that there were certain problems with outgoing prefixes (e.g. call centre operators' lack of awareness of the text relay prefix had led to calls being terminated) but it was also 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. The objective of the option to remove the need to dial a prefix for incoming calls was to facilitate text relay calls made by hearing/speaking users who are not familiar with the text relay service, thereby removing a potential barrier to the receipt of calls by hearing and/or speech impaired end users. To that end it contributed towards our objective of securing equivalence of access for disabled end users. However, it was also clear from our consultations, research and work with ICC that there was not a feasible and proportionate means of removing the prefix for outgoing calls without causing problems for households where a hearing person and hearing and/or speech impaired person both use the telephone. Our view is that, taking into account these difficulties, and the more limited affect on hearing and/or speech impaired end users' ability to make a relay call, it is not necessary or appropriate to remove the need to dial a prefix for outgoing calls.

3.69 The technical workshop provided an opportunity for CPs to gain a better understanding of the principles surrounding NGTR interoperability and implementation. However, the responses and workshop flagged a number of technical implementation issues with the preferred method of implementation which,

<sup>65</sup> The full research report by Opinion Leader can be found at:

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

whilst complex, appear to us to be capable of resolution during the development phase of the service. We will work closely with industry during the implementation period for NGTR to ensure these issues are addressed. For example:

- If 07 numbers are used, then the relay platform must be able to forward on any SMS inadvertently sent to that number. BT has confirmed that their NGTR platform should be able to recognise an SMS and then automatically or manually forward it.
- Users should be capable of keeping their relay numbers should they change CP. GC18 requires CPs to allow customers to be able to take their standard telephone number when switching CP. The preferred method of implementation links the allocated relay number to the customer's standard telephone number. Therefore, if the end user chooses to take their standard number to their new CP then their relay number will move with them. If the end user chooses not to take their standard number to their new CP then it is likely that they will lose their relay number and will have to re-register.
- A potential issue has recently emerged in relation to the preferred method of implementation. If customers choose to have an 03/07 relay number then it may affect the ability of CPs to apply the special tariff scheme required by GC15.3. GC15.3 requires CPs to charge for calls to a relay service at no more than the equivalent price as if that call had been made directly without the use of a relay service. In addition, CPs are required to apply a special tariff scheme designed to compensate subscribers who need to make calls to which a relay service applies for the additional time to make telephone calls using a relay service. This issue arises because the CPs' billing systems may not be able easily to identify 03/07 relay numbers as relay calls. We will continue to work with BT and CPs as they implement NGTR but we do not consider this issue should change our decision because our research and evidence submitted in consultation responses show that having to dial a prefix can inhibit incoming calls, particularly from automated call systems such as those used by hospitals and businesses. Removing the inability to make such calls without the need to dial a prefix will improve this situation and bring benefits to hearing and/or speech impaired users.
- In as far as the costs of incoming calls inhibits their making and so goes to equivalence of access:
  - Incoming calls would still be charged at the equivalent standard rate.
  - Outgoing calls, made by users requiring a relay service will not be affected as they will involve dialling a prefix.
  - The financial effect of increased call times for incoming callers is likely to be limited due to an increase in bundled call packages (with inclusive minutes), a decrease in average monthly household spend on telecoms<sup>66</sup> and the likely benefits of NGTR in terms of the improved flow to conversations which are expected to increase conversation speeds.
  - The option to call hearing and/or speech impaired relay users using the prefix will remain available and GC15.3 will retain a requirement for there to be a means by which callers using the relay service have a special tariff scheme

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<sup>66</sup> Communications Market Report 2012: Figure 5.52 average household spend has fallen to £65.04 a month in 2011 from £78.46 a month in 2006.

applied to these calls<sup>67</sup>. Callers will also be able to request that the relay user calls them back if necessary.

- We will monitor the issue as NGTR is implemented and if any changes are needed to the requirements then these can be examined at a later date.

3.70 Following careful consideration of the available evidence, including the ICC report and the outcome of the technical workshop, we consider that the option preferred by respondents represents an effective and proportionate solution which would carry limited implementation costs. Therefore, we consider that our provisional view in the 2012 Consultation remains valid, that costs associated with the requirement to remove the prefix for incoming calls to the relay service would be limited. Whilst there are a number of issues to be resolved during the implementation period (on which we will continue to work closely with stakeholders) we are satisfied that there is a technological means by which this can be achieved. We have therefore decided that there should be a facility whereby users can, on request, ensure that people calling them do not need to dial a prefix. We have made a change to the wording of GC15.5(g) that was proposed in the 2011 Consultation to reflect this. That wording now requires a relay service to:

“provide facilities to allow End-Users, who because of their disabilities need to make calls using a Relay Service, to receive incoming calls via the Relay Service, without the calling party needing to dial a prefix”

## The importance and appropriateness of all CPs continuing to provide access to a relay service

### Our proposals

- 3.71 The 2011 and 2012 Consultations proposed that the current requirement for all CPs to provide access to a relay service should continue. The 2012 Consultation, as we have explained in the preceding paragraphs, set out our view for consultation that on the basis of the further technical and costs evidence prepared by ICC<sup>68</sup> there will be some costs to industry associated with providing access to an NGTR service, but that these costs are likely to be limited. The 2012 Consultation also considered the costs to industry 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.
- 3.72 We explained that an alternative way of ensuring that hearing and/or speech impaired end users have access to NGTR would be to maintain USC4 on BT and remove the obligation in GC15 on all other CPs. However, this would result in BT being the only CP required to provide end users with access to a relay service. In considering whether to exercise our discretion to impose GCs on all CPs to ensure that disabled end users have access to electronic communications services equivalent to that enjoyed by the majority of end users, the 2012 Consultation set out the conditions of UK communications markets and the level of choice available to the majority of consumers. In particular, it considered: (i) choice in the fixed voice sector; (ii) the importance of mobile voice telephony to consumers; and (iii) the preferences

<sup>67</sup> For example, by the continued use of a prefix by those callers who wish to be subject to that tariff scheme. In this connection, BT has said that its NGTR service will retain the possibility for users to dial a prefix.

<sup>68</sup> Reports at Annex 6 of the 2011 Consultation and Annexes 6 and 7 of the 2012 consultation.

of users with hearing and/or speech impairments. We used this analysis to understand the potential benefits of ensuring that hearing and/or speech impaired users can access a NGTR service via all CPs (both fixed and mobile). We explained how our assessment involved setting the costs to industry that we have identified against the benefits to disabled end users of having access to a choice of CPs and the ability to make fixed and mobile voice calls.

### Choice in the fixed voice sector

- 3.73 The 2012 Consultation noted that there are more than 100 fixed voice providers in the UK, with BT's share of the retail fixed voice market declining from 50.7% in 2005 to 36.5% in 2010.<sup>69</sup> There is an increase in the number of 'bundled' offers, as consumers have sought to benefit from lower prices by purchasing more than one service (e.g. fixed line, broadband and multichannel TV) from a single provider. To illustrate this, the 2012 Consultation cited the fact that in 2011 87% of UK households bought fixed line voice services from a single supplier in a bundle<sup>70</sup>.
- 3.74 Because customers typically cannot reduce the price of a bundle by opting out of the fixed voice aspect of the service, if access to NGTR is only provided by BT, relay users 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.<sup>71</sup>

### The importance of mobile telephony to consumers

- 3.75 The 2012 Consultation described mobile telephony as integral to the way the majority of people in the UK communicate with each other and with businesses. The importance of mobile telephony to consumers was supported by research findings which showed high levels of mobile phone ownership and usage among UK consumers. For example, take-up of mobile phones has increased from 71% of households in 2000 to 94% in 2011<sup>72</sup>.
- 3.76 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%)<sup>73</sup>. In terms of call volumes, the past few years have seen an increasing proportion of total voice volumes originating on mobile networks. In 2010, 49.2% of voice call minutes originated on mobile networks, and based on current trends mobile is likely to have generated the majority of outgoing voice call volumes in 2011<sup>74</sup>.
- 3.77 The 2012 Consultation also showed that the overall proportion of mobile-only consumers had increased from 10% in 2005 to 15% in 2011. Users in socio-economic group DE are more likely than average (25% versus 15%) to have mobile-

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<sup>69</sup> Ofcom Communications Market Report 2011, page 286

<sup>70</sup> Ofcom Consumer Experience Report 2011, page 18

<sup>71</sup> For example, 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 (as of 22/05/2012, BT line rental costs £10.75 per month, Virgin Media line rental costs £13.90 per month).

<sup>72</sup> Ofcom Communications Tracking Survey

<sup>73</sup> Ofcom Consumer Experience Report 2011, page 18

<sup>74</sup> Ofcom Communications Market Report 2011, page 281

only telephony. The proportion of hearing impaired consumers using only mobile services has increased over the last three years, and in 2011 stood at 12%<sup>75</sup>.

- 3.78 The 2012 Consultation also considered the take up of mobile smartphone handsets, as for a user to access both the data and voice elements of an NGTR service via a single mobile device, the device will need to have internet access. We explained that smartphone ownership on mobile phones provides an indication of how many hearing and/or speech impaired users will be able to access NGTR using mobiles. The take-up of smartphones has increased dramatically over the last few years, for example 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<sup>76</sup> and in 2011, almost a third (32%) of mobile users accessed internet services on their phone, up from 26% in 2010<sup>77</sup>.
- 3.79 In light of the levels of mobile take up, especially the growth of mobile-only usage and the value attributed to these services, we consulted on the view 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.
- 3.80 Our provisional assessment was 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, maintaining the existing requirements would increase the benefits to disabled end users.

### Preferences of users with hearing and/or speech impairments

- 3.81 The 2012 Consultation set out that 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. The 2012 Consultation drew on the Opinion Leader research,<sup>78</sup> which 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 than with businesses and service providers. 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<sup>79</sup>.
- 3.82 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. The Opinion Leader survey found

<sup>75</sup> Ofcom Consumer Experience Report 2011, page 151

<sup>76</sup> Ofcom Communications Market Report 2011, page 264

<sup>77</sup> Ofcom Technology Tracker, Q1 2011

<sup>78</sup> The full research report by Opinion Leader can be found at:

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

<sup>79</sup> E.g. some participants reported that GPs/nurses would send automated mobile text messages or email them (e.g. to remind them of an appointment), but that it was not possible for a mobile text message/email to be sent back to them.



that having a phone available on the move (i.e. mobile) was an important feature for 58% of respondents<sup>80</sup>. We explained that this preference for accessible mobile voice telephony for relevant end users and the benefits it can provide in terms of their participation as citizens in society, are important elements of our assessment of the appropriate scope of the rules relating to relay services.

- 3.83 We consulted on our provisional conclusion that in light of our statutory powers and duties it was 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 proposed to implement the NGTR requirement by means of GCs on all CPs and were 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 were the only provider required to provide access to NGTR, hearing and/or speech impaired users who wished to use the service would be restricted to subscribing 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 hearing and/or speech impaired users with a text relay service on BT.

### Stakeholder responses

- 3.84 Respondents to the 2012 Consultation generally agreed that the requirement to provide access to a relay service should continue to apply to all CPs following the introduction of NGTR:
- All disability stakeholders and Reach 112 agreed that relay services should continue to apply to all CPs and that any change to this would be a retrograde step. Disability stakeholders considered that to ensure equivalence, hearing and/or speech impaired users should have the same choice of access to telephone providers as everyone else and should have access to relay services through a mobile phone. They considered that other forms of communication such as email or SMS were not acceptable replacements for telephony services in all cases.
  - BT agreed that all CPs should continue to be required to provide access to relay services and to remove this requirement would be a backward step as the UK has a competitive communications industry. BT considered that access to communications on the move is part of everyday life and that email, SMS etc were complementary to, rather than a substitute for, telephone calls.
  - FCS, Sky and CWW supported all CPs providing access to relay services but raised concerns over the potential wholesale costs.
  - MBG and UKCTA expressed concerns over the potential uncertainty over the ongoing costs and demand for the text relay service. MBG considered if the

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<sup>80</sup> The full research report by Opinion Leader can be found at: <http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/ofcom-relay-services/>

demand far exceeds expectations, the funding model must be kept under review to avoid placing a disproportionate burden on CPs.

## Our response

- 3.85 Our analysis of comments relating to the potential costs of CPs having to provide access to relay services are considered in paragraphs 3.13 to 3.19, 3.66 and 3.39 to 3.49 above.
- 3.86 As explained above at paragraph 2.10, 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. In considering whether to exercise this discretion we have carefully considered the costs to industry against the benefits to disabled users, including those of maintaining the current position whereby all CPs are required to provide access to a relay service by virtue of General Condition 15.3.
- 3.87 We consider that the current requirement on all CPs to provide access to their customers to a relay service is important given the competitive and dynamic communications market that exists in the UK today. Given our legal duties and the evidence presented in the 2012 Consultation, we consider it important that disabled end users have the same choices as other customers by being able to access fixed voice calls and benefit from the full range of services and price plans available in the market. Similarly, we consider that it is appropriate to maintain the requirement on mobile providers to provide access to an NGTR service as to do otherwise would result in disabled end users being excluded from the benefits of mobile voice telephony. Given the likely costs we have identified as accruing to industry, set against the benefits to disabled end users from participation in the UK's competitive communications market, we maintain our view that it is appropriate to require all CPs, both fixed and mobile, to provide access to NGTR once implemented. We agree with stakeholders that to do otherwise would be a retrograde step for hearing and/or speech impaired users. We consider, on the basis of our analysis in the 2012 Consultation, that the incremental benefits of providing access to NGTR on mobile devices (and the detriment that would arise were the requirements on all CPs, including MNOs, to be removed) is likely to be greater than the incremental costs and that, taking into account all of the costs and benefits, making the obligations relating to NGTR on all CPs is appropriate and proportionate.
- 3.88 We consider that in light of our analysis in the 2012 Consultation and the responses to that consultation, it is clear that the requirement for all CPs to provide access to relay services should continue. Therefore, we consider that the relay service should continue to be available through all CPs.

## Section 4

# Implementing Next Generation Text Relay

- 4.1 The 2011 Consultation proposed improvements to the current relay service through an amendment to GC15 and set out the proposed drafting of the new GC15.5, which would prescribe the functional capabilities of NGTR. The 2011 Consultation also set the broad principles by which Ofcom would approach the approval of an NGTR provider. Our 2012 Consultation, developing the broad principles from the 2011 Consultation, set out our proposed criteria, including KPIs, for approving an NGTR provider.
- 4.2 This section discusses the following issues from the 2011 and 2012 Consultations<sup>81</sup>, setting out our proposals, stakeholder responses and our decisions in relation to:
- The concept of equivalence of access and our decision to proceed with our Option 2 in relation to NGTR;
  - The drafting of GC15.5; and
  - The criteria for approving an NGTR service.
- 4.3 This section also explains how our decisions meet the required legal tests.

## The concept of equivalence of access and our decision to proceed with NGTR

### Our proposals

- 4.4 In the 2011 Consultation we used the market research carried out by Opinion Leader<sup>82</sup> to help us understand the telecommunications needs and experiences of those with hearing and/or speech impairments and to establish criteria for assessing equivalence of access to telephony services.
- 4.5 Some key findings of the market research by Opinion Leader were:
- There is no 'one size fits all' communications technology that would be suitable for all people who have hearing and/or speech impairments. Different technologies are perceived to have advantages and disadvantages for people depending on their needs and preferences;
  - People who have hearing and/or speech impairments make use of a wide variety of communications services, such as mobile text messaging and email, some of which they report as being more suitable for contacting friends and family than for contacting organisations and business;
  - The range of methods used to communicate with business and organisations is narrower than that used to communicate with friends/ family. For example, mobile

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<sup>81</sup> Only responses not previously summarised in the 2012 Consultation are summarised in this statement.

<sup>82</sup> The full research report by Opinion Leader can be found at:

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

text messaging and email are used by many to communicate with friends, family and work colleagues but not for more formal contacts;

- Mainstream commercially available services such as mobile text messaging and email were only used by a minority to communicate with organisations such as GPs' surgeries, the local council, shops, utilities and trades people. The research found that barriers exist that inhibit communication using these methods with such organisations. For instance, 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 it was not possible for a mobile text message/email to be sent back to them;
- BSL users who do not have English as their first language prefer to communicate using sign language because it allows them to express themselves more clearly;
- 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;
- Having 24/7 availability of communications methods is seen by the majority to be necessary (and important for equivalence);
- The ability to have real time conversations is particularly important to those who were profoundly deaf;
- The ability to communicate effectively with others improves the self-confidence and independence of those with hearing and/or speech impairments; and
- The ability to have private and confidential conversations is important.

4.6 In light of these findings we drew out in the 2011 Consultation some common factors that people with hearing and/or speech impairments consider are important when using communications services. These included:

- the ability to have natural conversations;
- the ability to have private conversations;
- the ability to interrupt conversations as needed;
- having flexibility in the choice of communications methods and devices; and
- having access to these services whenever they are required.

4.7 We used these factors as reference points by which to assess whether the current text relay service provides equivalence of access for disabled end users and to help assess the options we proposed in the 2011 Consultation. We consulted on our view that the current text relay service falls short of offering equivalence of access for hearing and/or speech impaired end users. We explained that our assessment suggested that improvements to the current service would help secure equivalence of access. We considered two options:

- Option 1: No change to the current provision of text relay. Our provisional conclusion was that at the most basic level text relay allowed users to make and receive telephone calls. However, we explained that the current service suffers

from a number of shortcomings, including impediments to the ability of users to have natural conversations at faster speeds.

- Option 2: Changing/improving the current provision of text relay. We therefore explored options for improving the current service to secure equivalence of access for hearing and/or speech impaired end users. More detail on the NGTR service proposed is set out in Section 2, above.

4.8 We asked stakeholders if they agreed that NGTR would secure equivalence of access (by contrast to the existing approved text relay service) and whether we had considered an appropriate range of improvements.

## Stakeholder responses

4.9 In general, responses to the 2011 Consultation from disability stakeholders, relay providers and three CPs expressed support for our proposals agreeing that they represented an improved experience compared to the current text relay service. However, among respondents to the 2011 and 2012 Consultations views differed on what “equivalence of access” meant and several respondents requested that Ofcom provide clarity on the definition of equivalence.

- Disability stakeholders (including TAG, UKCoD, DAART and The British Deaf Association) in response to the 2011 Consultation considered that functional equivalence meant a relay service that was provided with no restrictions, every day of the year, at real time conversational speeds, meeting the various needs of users at no additional cost to standard charges. In response to the 2012 Consultation DAART, UKCoD/TAG and Hearing Link considered that “functionally equivalent access” to telecommunications at equivalent cost is vital for hearing and/or speech impaired users. They considered that transcription speeds of less than 125wpm did not meet functional equivalence for those users who could communicate by speech or had some hearing but needed text to provide clarification in real time. Several respondents including DAART<sup>83</sup>, UKCoD/TAG and Sense recommended a portfolio of services to cater for the different needs of end users enabling separate KPI targets for each type of relay service. Sense recommended the services, irrespective of location or network, addressed the full range of needs of deafblind people across a fully programmable and integrated data (text), voice and video platform.
- Reach 112 (a relay provider) supported an integrated system with text, voice and video which was set to the Total Conversation European Telecoms standards.
- Sorenson, in response to the 2011 Consultation, also considered that equivalence of access should be assessed in functional terms and that it was necessary to ensure the same usability of services for disabled end users, even if this requires the introduction of different means of providing and using those services. Sorenson’s view was that NGTR would not deliver functional equivalence for all deaf users. Sorenson was also of the view that Ofcom’s assessment of the benefits of NGTR and ‘Captioned Telephony’<sup>84</sup> was flawed.

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<sup>83</sup> In response to the 2011 Consultation

<sup>84</sup> Captioned Telephony is the name of a service currently available in the USA. It uses speech recognition software (on the relay assistant’s voice) to deliver text/captions to the person with impaired hearing alongside a conventional two-way telephone call. It does not enable users without understandable speech to type words for the relay assistant to speak to the other user.

Sorenson considered that 'Captioned Telephony' would provide a number of benefits to deaf end users over NGTR that are not recognised by Ofcom.

- Many disability stakeholders also felt having 'Captioned Telephony' in addition to NGTR would better cater for differing user needs, deliver choice to end users and stimulate competition in the market.
- PhoneAbility, in response to the 2011 Consultation, suggested that Member States are in compliance if they take more than one specific measure and noted that the UK had done this. They considered that on this reading, the UK has complied with its obligation under this and related Articles and disability bodies cannot raise charges of non-compliance with the Directive.
- As discussed and addressed in the 2012 Consultation, a number of CPs questioned whether our NGTR proposals were necessary given that many of the target group use mainstream methods to communicate, such as email and SMS. In particular, the 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. We have addressed these responses in section 3 above.
- In response to the 2011 and 2012 Consultations, BT considered that NGTR was the most appropriate and proportionate way to meet the equivalence requirements. However, BT considered that equivalence could only be achieved by enabling the same person-to-person communication experience for all telephone users without the need for an interpreter. Therefore, BT considered that businesses and organisations needed to ensure that their services were accessible to everyone in order for one to one conversational equivalence to become a reality and ensure any relay service achieves its full potential. Other CPs also drew attention to the wider role of Government, industry and public bodies in ensuring equivalence. For example, UK based businesses and services making their services more accessible to hearing and/or speech impaired users.
- Many CPs (including BT, Sky, UKTA, the MBG) questioned elements of our cost/benefit analysis. We have addressed these responses in section 3, above.

## Our response

- 4.10 The 2012 Consultation and section 3 of this Statement address the points raised by respondents relating to Ofcom's cost/benefit analysis, the method of implementing NGTR (i.e. by USC and/or GC) and that it is appropriate to exercise our powers to impose obligations on all CPs, not just BT.
- 4.11 In Ofcom's view, the Opinion Leader research and the consultation responses go to demonstrating that there is no simple definition of what constitutes "equivalence of access" and that it is a broad concept not tied to any particular service<sup>85</sup>. As we explained at the outset of our review, there is no 'one size fits all' technology that would be suitable for all people who have hearing and/or speech impairments. In the absence of any comprehensive definition of what amounts to equivalence of access, we have carefully considered the requirements of the European legislative framework, the findings of our market research, experience and practice in other

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<sup>85</sup> These were also the stated views of the government when implementing the changes to UK legislation to implement the revised EU framework. See page 55 of: [http://www.culture.gov.uk/images/publications/FWR\\_implementation\\_Governmentresponse.pdf](http://www.culture.gov.uk/images/publications/FWR_implementation_Governmentresponse.pdf)

European countries<sup>86</sup> and the responses to the 2011 and 2012 Consultations in considering the decisions we have made in this document in relation to NGTR.

- 4.12 In particular, having considered all of these things, we remain of the view that equivalence of access is a broad concept. It takes into account function and is informed by the sorts of factors we have outlined. Relevant provisions of the Universal Service Directive and the Citizens' Rights Directive indicate that it is concerned with access in terms of the core function, and the ability, of disabled end-users to make and receive end to end voice telephone calls - the conveyance of words through speech from one person to another - or their equivalent by different means.
- 4.13 The five common factors, which we put forward in the 2011 Consultation as a benchmark for assessing equivalence of access, represent a useful framework for analysis. But, we recognise that these factors are not fully achievable in all cases: for example, a relay call is not a completely "natural" call, nor is it "private" given the presence of a relay assistant and not all devices are guaranteed to work with the relay service given technological constraints. The factors we presented are not, therefore, best regarded as prescriptive rules; rather, they form part of a range of factors going towards what we understand provides equivalence of access. The service adopted in furtherance of this objective will therefore represent a balancing of various issues to secure the broad concept of equivalence of access (and function) for hearing and/or speech impaired users within the meaning of the relevant legislative provisions.
- 4.14 Having carefully considered the above, the evidence available and the responses received by industry and disability stakeholders, Ofcom maintains its view that the current text relay service suffers from a number of significant shortcomings. As a result, we consider it is no longer fit for purpose in securing equivalence of access for hearing and/or speech impaired users.
- 4.15 That being the case, we consider that it is necessary to act to comply with our European and domestic legal obligations to secure equivalence of access (by making changes to the regulatory requirements for relay services). As to those changes, we are satisfied, based on the available evidence and consultation responses, that the new requirements relating to NGTR will secure equivalence of access for hearing and/or speech impaired end-users generally, and will do so in a proportionate way having regard to what is technologically practicable and achievable at the present time. In particular, they will enable such end-users to make end to end fixed-line and mobile voice calls (using different means as appropriate).
- 4.16 The requirements we have decided to impose are necessary to secure this equivalence of access. They do not, however, impose any greater regulatory burden than is necessary to do so. Consistent with our proposals, we have decided against mandating the technical means by which NGTR will be delivered on the basis that industry is better placed to develop the platform. In addition, the objective is to create a flexible set of rules, which mean that the relay service is capable of evolving with technological developments, rather than remaining static as has been the case with the current text relay service. By focusing on the outcomes of the relay service, the NGTR provider (and CPs who will provide access to the NGTR service to end-users

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<sup>86</sup> We have found that, in terms of implementing Articles 7 and 23a: Up to 14 Members States require the provision of text relay service by communication providers. No Members States require the use of voice recognition software to deliver the text relay service.

pursuant to their obligations under GC15) can select the technical standards which best fits their approach.

- 4.17 In particular, as we are not mandating the technical means of delivery, and for the further reasons set out below at paragraphs 4.48 to 4.60, we have decided against making it a requirement of NGTR that the service use speech recognition software or provide a separate ‘Captioned Telephony’ type service. Broadly, and as explained further below, that option would impose on CPs a greater burden than would be justified by the current evidence of the accuracy and efficacy of the available technology without providing functions of NGTR that go to securing equivalence. As a result, it would impose burdens that we do not consider can properly be regarded as objectively justified and proportionate means of securing our equivalence objective.
- 4.18 For the reasons given in section 3, we have decided that it is appropriate to implement our proposals by way of revocation of USC4 and the modification of GC15 to include a new paragraph 15.5 setting out the functional characteristics of the relay service to which CPs will need to provide access for their customers. Annex 3 contains the formal notification of the revocation of USC4. We have also decided that it is appropriate to exercise our powers to require all CPs to provide access to NGTR, again for the reasons set out above in section 3. Annex 2 contains the formal notification of the amendment to the General Conditions.
- 4.19 We explain in more detail below at paragraphs 4.129 to 4.137 that our decision is consistent with our legal obligations.

## The wording of General Condition 15.5

### Our proposals

- 4.20 In order to implement the improvements to the text relay service we proposed to insert a new paragraph into the General Conditions which would set out the functional requirements that the NGTR service must meet. Previously, approval criteria have applied when a service has been considered for approval by Ofcom under the existing GC15. However, for the sake of transparency and in order to ensure that CPs are fully aware of the obligations to which they are subject under the revised GC15 in the 2011 Consultation we set out the draft text of GC15.5 which required that:

*“A relay service provided by CPs to its subscribers pursuant to GC15.3 must:*

- a) provides facilities for the receipt and translation of voice messages into text and the conveyance of that text to the terminal of End-Users of any provider of Publicly Available Telephone Services and vice versa;*
- b) provide facilities for the receipt and transmission of voice communications simultaneously with text communications;*
- c) provide facilities for access to Emergency Organisations;*
- d) be available for use by End-Users at all times;*
- e) be capable of being accessed by End-Users of the service from readily available terminal equipment, including textphones, personal computers and mobile telephones;*
- f) not prevent End-Users from communicating with other End-users of other Relay Services;*
- g) not require the dialling of a prefix number for End-Users to access the service;*



- h) insofar as reasonably practicable, allow for communication between End-Users of the service at speeds equivalent to voice communications;*
- i) ensure the confidentiality of communications between End-users of the service;*
- j) comply with any directions in respect of the service which Ofcom may make from time to time; and*
- k) be approved by Ofcom for the purposes of this Condition 15.5”.*

4.21 We asked stakeholders if they agreed with the proposed drafting of GC15.5 and whether it satisfactorily embodied the improvements we suggested for NGTR.

### **Stakeholder responses**

4.22 Respondents to the 2011 and 2012 Consultations raised a number of specific points regarding the drafting of GC15.5 and we have carefully considered all those responses in coming to our decision. The key comments from stakeholders and our response to those comments are set out below. They are presented in the same order as the draft GC15.5 (see paragraph 4.20 above). In a number of instances we have made amendments to the text of our proposed GC15.5 in light of consultation responses. In all cases we are satisfied, for the reasons given in this Statement and our consultation documents, that the changes we have made reflect the policy considerations upon which we consulted and which underpin our decision to adopt NGTR.

#### Provide facilities for the receipt and transmission of voice communications simultaneously with text communications

Our proposal

4.23 The 2011 Consultation proposed that NGTR should allow delivery of text and voice communications “simultaneously” to make use of modern technology and enable a more natural flow of conversation.

Stakeholder responses

4.24 BT stated that it was not technically possible given the voice and data element and the physical constraints of the relay assistants for NGTR to deliver voice and text communications 100% simultaneously and that a short delay was likely to persist in calls.

Our response

4.25 We carried out further investigation of BT’s statement and further consideration did show that there will remain an unavoidable but short delay between voice and text communications no matter what technology is used to generate it. This was caused by having to recognise speech and produce text from speech, as well as the fact the text element may be delivered over the internet<sup>87</sup>. We acknowledged this in the 2012 Consultation and have amended the drafting of GC15.5(b) to require the relay service to:

“Provide facilities for the receipt and transmission of voice communications in parallel with text communications, allowing both

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<sup>87</sup> Data sent over the internet uses a different channel to those sent over voice communications.

channels to work in tandem to deliver near synchronous voice and text”.

- 4.26 This does not change the policy intention of NGTR. The requirement will still 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. These are important aspects of the broad concept of equivalence of access.

#### Be available for use by End Users at all times

Our proposal

- 4.27 The 2011 Consultation proposed that NGTR should be available for use by end users at all times. This was so that NGTR would be available 24 hours a day as is the case with the current text relay service.

Stakeholder responses

- 4.28 BT considered that the proposed text of GC15.5(d) went beyond existing regulatory requirements for non relay calls as it did not take account of the existing requirements in GC3 and GC13 which acknowledge that CPs may not provide end users with access to voice communications in the event of unavoidable service failure or an end users non-payment of bills.

Our response

- 4.29 We acknowledge that there may be instances where the relay service may not be provided by a CP for example if an end user has not paid their bills (in which case there are circumstances in which the CP can legitimately refuse to provide a service to that user) or if there is a catastrophic failure of the telecommunications system. We have amended the wording of GC15.5(d) to reflect this, as follows:

“Subject to Conditions 3 and 13.1, be available for lawful use by End-Users at all times.”

- 4.30 This does not change the policy intention that in the normal course of events NGTR will be available 24 hours a day. It reflects our decision that the required equivalence of access can be secured in a proportionate and appropriate way, at current levels of demand, and, if there is what we have projected as a medium level increase in demand, without in the ordinary course of events the need for any restrictions. It is worth noting that irrespective of this, existing provisions in the GCs ensure that emergency calls can be made even if bills have not been paid.

#### Be capable of being accessed by End Users of the service from readily available terminal equipment, including textphones, personal computers and mobile telephones

Our proposals

- 4.31 The 2011 Consultation proposed that the relay service should be capable of being accessed by users of the service from readily available terminal equipment, including textphones, personal computers and mobile telephones. Our objective was to ensure that the service is accessible via off the shelf/mainstream consumer electronics such as PCs, while still supporting the current level of service to existing terminals. This was because our research showed that users had criticised the current text relay

service for not working on mainstream equipment. We also wanted existing users to be able to use the service without buying new equipment. We recognised that whilst users of existing dedicated text relay equipment may not see any benefits from the improved service, users should have a choice of which equipment to use to access the service.

## Stakeholder responses

### 4.32 In response to the 2011 Consultation:

- BT considered that NGTR increased the choice of accessible devices to use the service, reducing an end user's start up costs and allowed a variety of communication options.
- BT, Sky and UKCTA were concerned that the drafting of the GC required CPs to guarantee that terminal equipment is compatible, which is beyond their control. BT suggested that the drafting should instead require CPs to ensure there are no unnecessary restrictions or limitations to the service being accessed by end users.
- Sense recognised the value of ensuring compatibility with existing textphone equipment due to the cost of Braille equipment. In its response to the 2012 Consultation, Sense also wanted to ensure that other legacy equipment e.g. Braille equipment could continue to be used and UKCOD/TAG highlighted that there were other devices other than textphones currently being used to access text relay.

## Our response

4.33 The policy aim, which is reflected in the drafting of GC15.5(e) is to allow users to choose to continue to use their existing equipment, albeit without benefitting from the improvements to the service, or access the improved service through a range of more mainstream equipment such as a fixed line telephone in conjunction with a PC, laptop or internet enabled mobile telephone. We would consider that this covers all readily available equipment which is currently used to access the text relay service and that this would include Braille reading equipment. However, to ensure clarity of this point, we have added 'Braille readers' to the text of GC15.5(e).

4.34 We have considered the point raised by CPs that it is not within their control to ensure that all readily available terminal equipment is compatible with the relay service. We acknowledge the fact that, given the move away from sole reliance on specialist equipment, the multiplicity of devices on the market and the rate of technological change, it will not be possible for CPs to guarantee that all of those devices are compatible with the relay service in place. We have therefore amended the text of the general condition to clarify this point. GC15.5(e) reads as follows:

“be capable of being accessed by End-Users of the service from readily available compatible terminal equipment, including textphones, Braille readers, personal computers and mobile telephones”

4.35 In any event, the compatibility of the relay service with a range of mainstream equipment is something that we would examine closely during the approval process for a relay service (see further below).

## Do not require the dialling of a prefix number for End Users to access the service

### Our proposal

- 4.36 As discussed in more detail in section 3 above, callers wishing to make use of the existing relay service are required to dial a prefix in order to signal that a relay assistant is needed. In the 2011 Consultation, we proposed the removal of the prefix as part of our proposals for NGTR. The consultation and the draft GC15.5 did not specify whether the removal of the prefix applied to outgoing calls made by a relay user, incoming calls or both. In response to the 2011 Consultation, stakeholders asked for clarification over how this would actually be implemented and whether it would apply to both ingoing and outgoing calls.
- 4.37 In the 2012 Consultation we revised our proposal to apply the removal of the requirement to dial a prefix to access a relay service to incoming calls to the hearing and/or speech impaired user only. Reference should be made to paragraphs 3.57 to 3.63 above for more detail.

### Stakeholder responses

- 4.38 As discussed in section 3 above, all respondents to the 2012 Consultation agreed in principle that the requirement to dial a prefix for incoming calls to hearing and/or speech impaired users should be removed. Reference should be made to paragraph 3.65 above for more detail of stakeholders' views.

### Our response

- 4.39 As set out in section 3 above, the 2012 Consultation aimed to establish that there was a feasible means of removing the requirement to dial a prefix for incoming calls and that the costs of doing so would be proportionate. As explained above, following careful consideration of the available evidence, including the ICC report and the outcome of the technical workshop, we consider that the option preferred by respondents represents an effective and proportionate solution which would have limited implementation costs. Whilst there are a number of issues to be resolved during the implementation period (on which we will continue to work closely with stakeholders) we are satisfied that there is a technological means by which this can be achieved. We have therefore decided that there should be a facility whereby users can, on request, ensure that people calling them do not need to dial a prefix, but we do not intend to mandate the specific means by which this outcome must be achieved.
- 4.40 We have made a change to the wording of GC15.5(g) that was proposed in the 2011 Consultation to reflect this. That wording now requires a relay service to:

“provide facilities to allow End-Users, who because of their disabilities need to make calls using a Relay Service, to receive incoming calls via the Relay Service, without the calling party needing to dial a prefix”

## Insofar as reasonably practicable, allow for communication between End Users of the service at speeds equivalent to voice communications

### Our proposals

- 4.41 The 2011 Consultation set out the findings from our market research<sup>88</sup> (see paragraph 4.5 above) which showed that the current text relay service does not allow users to have conversations approaching near-real time conversational speeds. We proposed that NGTR would improve the speed and flow of conversation by enabling more natural conversations and by giving users the ability to interrupt conversations as needed and allowing users with residual hearing and speech to speak directly to the hearing user, rather than relying on text in both directions to do so. Our proposals specified that the relay service must be capable, insofar as reasonably practicable, of allowing for communications between users of the service at speeds equivalent to voice communications. In other words, taking account of matters such as the available technology (whose efficiency is proven), the need for accuracy and the time lags that the need for a relay assistant will inevitably involve, speeds that come as close as possible to those of voice communications.
- 4.42 We also explained why we did not consider that it was proportionate or appropriate to mandate the use of speech recognition software, as we did not believe the technology was sufficiently advanced to guarantee low enough error rates to provide certainty that faster conversations would result. We also explained why we considered that our proposals for NGTR offered additional benefits in comparison with Captioned Telephony.
- 4.43 The wording we proposed for GC15.5(h) aims, overall, to specify what NGTR should be capable of doing whilst retaining flexibility over how the specifications should be achieved. The wording of GC15.5(h) to require CPs to allow communications between end users of the service, insofar as reasonably practicable, at speeds equivalent to voice communications aimed to ensure that NGTR was sufficiently flexible over time to encompass what can practically be delivered taking account of any other requirements, for example accuracy levels, specified separately in the approval criteria or KPIs.
- 4.44 Our 2012 Consultation proposed approval criteria and KPIs as part of the approval criteria, with two KPIs relating to transcription speeds (over 40 wpm for each call and an average across all calls of 60 wpm). The approval criteria and KPIs are discussed in more detail in below. However, responses relating to conversation speeds for text relay are also discussed here.

#### Stakeholder responses

- 4.45 In response to the 2011 Consultation, Sky, BT and UKCTA raised concerns that the wording 'reasonably practicable' in the drafting is open to interpretation and recommended changing the drafting.
- 4.46 In response to the 2011 and 2012 Consultations, some disability stakeholders and relay providers queried how this requirement could be met if the KPIs only required 60 wpm<sup>89</sup>:
- The majority of disability stakeholders considered that the KPIs for speed of transcription should be at least 125wpm to provide functional equivalence (as speeds would be closer to standard voice calls) with anything less not representing a step forward. Respondents recommended that the speeds could then be slowed down for users as required (e.g. for deafblind users). They

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<sup>88</sup> The full research report by Opinion Leader can be found at:

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

<sup>89</sup> Our 2011 Consultation set out that conventional voice calls were 170 wpm.

considered that for users making use of both the voice and text elements of the call, it is crucial that the speech and text elements are as closely synchronised as possible. They considered that transcription speeds of 60 wpm were not equivalent and did not represent a captioned relay service.

- Many disability stakeholders and relay providers (such as Hearing Link, TAG, UKCoD, DAART, Significan't and Sorenson Communications) questioned our findings in the 2011 Consultation regarding speech recognition and expressed concerns that we were not proposing to mandate 'Captioned Telephony' or WebCapTel<sup>90</sup>. Respondents stated that 'Captioned Telephony' would substantially increase the speed of transcription of conversations, could achieve good accuracy levels and could potentially benefit numerous deaf people with understandable speech.
- UKCoD/TAG and other disability stakeholders considered that to achieve functional equivalence, transcription speeds of 125wpm with 98% accuracy, with a maximum delay of 8 seconds tested using a standard script, was needed<sup>91</sup>. DAART and Hearing Link stated that the WebCapTel service could offer transcription speeds of 125 wpm with accuracy of 98% for straight talk without jargon and recommended a trial of 'Captioned Telephony' to help us make an informed decision on relay services. Speeds or accuracy levels could then be reduced to meet users' needs. Hearing Link also provided reports from an Australian trial of 'Captioned Telephony'.
- Action on Hearing Loss considered that accuracy is extremely important, particularly when people can enter into contracts by telephone, requiring both parties to be confident in the accuracy of the conversation.

4.47 Significan't (a relay provider) stated that they had conducted a 12 week pilot in 2011 of 'Captioned Telephony' (under the name Smart Captions) which measured that after a short training period, the service operated at an average speed of 143 words per minute in both directions at the start, increasing to 160 wpm at the end of the pilot. Sorenson Communications (a relay provider) stated that in their own experience of providing 'Captioned Telephony' it achieves high levels of accuracy (around 95%) and very little delay in the transmission of text (between 3 and 5 seconds). Reach112 stated that current versions of speech to text software produced high levels of accuracy with very little training and were currently available in Reach 112 relay services.

4.48 MBG recommended that the transcription speeds proposed in the KPIs (see paragraph 4.95 below) remain unchanged until NGTR can be assessed, particularly when some of the factors are going to be beyond the relay provider's control (i.e. the data element being delivered by the Internet).

## Our response

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<sup>90</sup> Captioned Telephony is the name of a service currently available in the USA. It uses speech recognition software (using the relay assistant's voice) to deliver text/captions to the person with impaired hearing alongside a conventional two-way telephone call. It does not enable users without understandable speech to type words for the Relay Assistant to speak to the other user. WebCapTel is a product similar to the Captioned Telephony service available in the USA, but with the caption delivered to a PC rather than a dedicated captioned telephone.

<sup>91</sup> Respondents pointed to ITU-TD 464 (PLEN/16) as a basis for their 125wpm/98% accuracy/8 second delay request. This document is a draft document and relay providers have not been independently tested against these targets.

- 4.49 It is evident that the term 'Captioned Telephony' can be used to refer to the name of a service as well more generically to the use of speech recognition software to deliver captions in association with a telephone call.
- 4.50 **Speech recognition software** is a technology that can be used by relay service providers to generate text/captions by using a trained relay operator who "re-speaks" what is spoken to them rather than typing. The speech recognition software generates captions which are then re-checked for accuracy before being sent on to the hearing impaired party to the call. On the basis of present technology, speech recognition software must be 'trained' to a particular person's voice, in this case the relay assistant, to provide any level of accuracy of recognition. The relay assistant repeats the words of the hearing caller to generate the text. It is not currently possible to operate a relay service using speech recognition without using a relay assistant whose voice has been trained to use the system.
- 4.51 '**Captioned Telephony**' is the name of a service currently available in the USA. It is aimed at those who have some speech or hearing and uses speech recognition software to deliver text/captions to the person with impaired hearing alongside the voice element of a conventional two-way telephone call. It is not suitable for profoundly deaf people or people with severe speech impairment. It does not enable users without understandable speech to type words for the relay assistant to speak to the other user.
- 4.52 We explained our view of the benefits of NGTR over Captioned Telephony in the 2011 Consultation and set out why, based on the evidence available to us, we did not consider that it would be appropriate or proportionate to mandate that the NGTR service must use speech recognition software or provide a separate 'Captioned Telephony' type service. In the light of the consultation responses received, we again looked closely at the case for requiring the use of speech recognition software/'Captioned Telephony'.
- 4.53 In order to make it a requirement of the service (for instance, by a direct requirement to use such technology, or indirectly by way of faster translation targets in the KPIs), we would need to be satisfied, and be capable of demonstrating, that it was appropriate and proportionate to do so in the light of what is technologically possible at the present time and likely costs. In other words, be satisfied on the basis of robust evidence that imposing such a requirement could be properly characterised as both objectively justified and no more onerous an intervention than is necessary to secure equivalence of access.
- 4.54 In particular, we would need to demonstrate, with evidence, that a higher translation target can practically be achieved alongside the accuracy targets. We acknowledge that not all calls require high accuracy levels, but several stakeholders expressed the view that there are many calls where accuracy is vital, for example, if a user is contacting their bank, purchasing goods or services over the phone.
- 4.55 On the basis of the evidence available to us, however, we have decided that it would not be appropriate or proportionate to mandate the use of speech recognition technology or 'Captioned Telephony' directly by changes to the wording of the GCs or indirectly via an increase the KPI transcription targets. We do not have clear evidence that faster speeds can also provide consistent and sufficient levels of accuracy. In those circumstances, the option of requiring the use of speech recognition or 'Captioned Telephony' would impose a burden on CPs more onerous than would be justified by the evidence available (and without, as set out in the 2011 Consultation, providing functions of NGTR that go to securing equivalence).

Accordingly, it could not properly be regarded as objectively justified and necessary to secure the required equivalence.

- 4.56 In particular, we have not identified any independent or independently verified, statistically robust<sup>92</sup>, technical studies demonstrating that speech recognition software guarantees low enough error rates to ensure equivalence. Nor have any such studies been provided or referred to us by stakeholders. However, the evidence that is available suggests that accuracy is likely to be problematic using current technology. For example:
- Further investigation of the recent Australian trial of ‘Captioned Telephony’ funded and delivered by ACE<sup>93</sup> showed that accuracy ratings of 98% were met by the relay service lowering the accuracy marking scheme for calls the relay service deemed difficult or containing jargon. In other words, a difficult call with many mistakes in transcription could still show up as 98% accurate because it would be marked more leniently.
  - Trials conducted by BT tested different types of speech recognition software (in 2006, 2008 and 2010). The most recent study showed that test candidates achieved accuracy rates of between 62% and 95%. However, accuracy rates only hit 95% on one occasion. Of the others, there was a spread of accuracy rates with most either in the 60% or 80% range (although based on a small sample size).
  - As part of a study of speech recognition conducted by the University of Salford in 2010, commissioned by Ofcom, accuracy rates of users of the two best in class Automatic Speech Recognition products were between 74% and 99%<sup>94</sup>. However, accuracy rates only hit 99% on one occasion. The majority of accuracy rates were between 80 – 89% (although based on a small sample size). The test did not replicate live call conditions.
- 4.57 These examples highlight the importance of understanding the issue of accuracy and reinforce the lack of comprehensive independent data around speech recognition software.
- 4.58 By contrast, the requirements for NGTR would go to securing equivalence of access in a way that is commensurate both with what that concept entails and the available evidence. In particular, so far as is relevant, they would enable the use of text/captions to operate alongside the ability to speak and hear the conversation, as occurs in the ‘Captioned Telephony’ service (see paragraph 4.50 above) using typing rather than re-speaking. The requirements would also still allow users without recognisable speech, if they so chose, to type words to be spoken by the relay assistant (unlike the ‘Captioned Telephony’ service).
- 4.59 In addition, whilst our proposals do not mandate the use of speech recognition software to generate those captions they equally do not specify the technology to be used in generating text/captions. Therefore our NGTR proposals do not preclude the use of such speech recognition software technology, provided that the other requirements (such as accuracy) of the mandated service are met. We consider that

<sup>92</sup> E.g. entailing a large sample sizes with live call conditions

<sup>93</sup> ACE funded trials of captioned telephony in Australia and provided a report on the trial. ACE is a non-profit organisation which aims to deliver the best possible service for deaf people.

<sup>94</sup> <http://stakeholders.ofcom.org.uk/market-data-research/other/policy-related-research/usability-research/research/speech-to-text-voip/>



this approach strikes the right balance between ensuring accuracy levels are maintained, whilst maintaining flexibility for service development in the future. Ofcom is open, and would indeed welcome, relay providers using speech recognition software to deliver the service where this is appropriate for the hearing and/or speech impaired user and sufficiently accurate. We consider there is commercial incentive for a relay provider to introduce speech recognition software if it leads to quicker and cheaper call handling.

- 4.60 We have not, therefore, made any amendments to the wording of GC15.5(h) as implemented. In recognition that speech recognition technology is evolving and accuracy rates can be expected to improve over time, the wording for GC15.5(h) is intended to enable flexibility in transcription speeds over time as technology develops.
- 4.61 In light of the fact that speech recognition technology is evolving and that accuracy rates can be expected to improve over time, we intend to:
- a) Monitor the impact of the NGTR service in relation to conversation speeds as part of our planned qualitative research of the user experience given the expected increased use of speech and hearing carry-over.
  - b) Work with BT, as the current text relay provider, who have agreed that they will carry out and report on their ongoing tests of speech recognition technology.
  - c) Monitor developments with speech recognition software technology going forward to assess its scope to further deliver enhancements to conversation speeds. We will also consider whether additional research commissioned by Ofcom could facilitate stakeholder debate.
  - d) Explore with BT and disability stakeholders the impact and issues surrounding changing accuracy levels based on relay users' needs and experience. This will enable us to explore the feasibility of facilitating faster conversation through accepting a degree of trade-off in accuracy, as certain disability stakeholders responded that the highest levels of accuracy are not necessarily needed for all parts of all calls.

### Ensure the confidentiality of communications between End Users of the service

#### Our proposal

- 4.62 The 2011 Consultation set out that conversations using the relay service should continue to be treated as confidential by relay assistants and be subject to strict confidentiality requirements to ensure, to the greatest extent possible, that disabled end users are able to use a service in a way which is equivalent to that of making a voice call. The draft text of GC15.5(i) therefore set out a requirement for confidentiality. The 2012 Consultation also included a confidentiality requirement in the approval criteria.

#### Stakeholder responses

- 4.63 In response to the 2011 Consultation, UKCTA, Sky and BT raised concerns with the proposed wording in GC15.5 in respect of confidentiality. They stated that complete confidentiality for all calls was not possible when using the relay service due to the presence of the relay assistant.

## Our response

- 4.64 We recognise that due to the presence of a relay assistant CPs cannot completely ensure the confidentiality of communications between end users of the relay service. Nonetheless, a high level of confidentiality goes to securing the appropriate equivalence of access: its absence could inhibit the use of voice services. Our intention, therefore, is to ensure that the high levels of confidentiality that are applied in the existing relay service continue with NGTR which is why confidentiality provisions are in the GC and the approval criteria. We will review relay service operators' proposed measures for confidentiality in the course of the approvals process. We have amended the text of our draft of GC15.5(i), as follows:

“take measures to ensure the confidentiality of communications between End-Users of the service”.

## Other requests for change

- 4.65 In response to our 2011 Consultation, several respondents requested additional requirements to be added to the wording of GC15.5 we address a number of the key suggestions below.

### Customising NGTR

- 4.66 In response to the consultations, many disability stakeholders (e.g. Hearing Link, Sense, NDCS, Action on Hearing Loss, UKCoD/TAG and the BDA) wanted NGTR to be adaptable to the differing needs of users and allow them choice over transcription speed, font size, accuracy and the ability to interrupt. For example:
- TAG and Sense were concerned that the ability to interrupt and faster transcription speeds could cause problems for deafblind users with Braille terminals. As Braille users would be following conversation by using their hands on the Braille keyboard and could only access one Braille character at a time, it would make it difficult for the Braille user to keep up with the transcription of text/captions. Sense recommended that call progress announcements may need to be de-selectable or stored until the Braille communication is complete.
  - NDCS argued that flexibility was required on transcription speeds according to the need of the end user, particularly to cater for young deaf people who were likely to prefer different transcription speeds.

## Our response

- 4.67 The 2011 Consultation did not set out a requirement for NGTR to be capable of customisation. This is not a current requirement of the text relay service and we considered that the increased choice of accessible devices to use the service allowed a variety of flexibility in communication options.
- 4.68 The KPIs relating to transcription speeds allow for speeds to be increased or decreased to meet a users requirements, up to the minimum required level, as the 'per call' transcription speed KPI says “when the textphone user is able to receive 40wpm or faster”. Therefore the relay service will have flexibility in terms of providing a slower or faster service if that is required by the end user. However, the proposed KPIs only require an average speed of 60 wpm. Higher speeds are currently limited by typing speeds and accuracy requirements. As we explain above, we intend to monitor the impact of NGTR on conversation speeds given the expected increased

use of speech and hearing carry-over, monitor the developments with speech recognition software technology and work with BT in relation to their ongoing tests of speech recognition software and the impact and issues surrounding a trade off between speed and accuracy of transcription.

- 4.69 The requirement for NGTR to be available through readily available terminal equipment such as textphones, personal computers and smartphones will allow users some element of choice/customisation. For example font size of the text received and the ability to interrupt (users who continue to use textphones will not be able to use the facility to interrupt).
- 4.70 We do not consider that we need to mandate that the text relay service be capable of customisation as the requirement that the text relay service be available through readily available devices will allow end users to choose the device most suited to their needs and set their font size etc as their device allows. Also the KPIs for transcription speeds allow for some flexibility of service provision. Therefore we are not adding this further requirement to GC15.5.

#### Text-to-Text calls

- 4.71 In response to the 2012 Consultation, UKCoD/TAG and PhoneAbility commented that text-to-text calls were vital. UKCoD/TAG wanted the new service to continue to allow text-to-text calls via the relay platform to ensure text users can benefit from the rebate schemes and the call progress announcements the platform provides.
- 4.72 BT also considered that the new text relay service must include text-to-text as it provides benefits to users who want to have direct contact with the called party without the presence of a third party relay assistant and also provides efficient use of the relay service by avoiding the use of a relay assistant when one is not needed. However, BT considered that more business and organisations needed to publish numbers so that a user can utilise this service.

#### Our response

- 4.73 For the reasons given above at paragraphs 3.13 to 3.17 the requirement for the NGTR service to provide for text-to-text communications will not be included in GC15.5. However, BT has notified Ofcom that it intends to continue to provide text-to-text functionality as part of its NGTR service due to the cost efficiencies it provides. We consider that other relay providers may have similar commercial incentives to offer the service in order to reduce their operational costs.

#### Our decision

- 4.74 The paragraphs above have set out our careful consideration of the issues and the consultation responses on them. Likewise, the decision we have made about the drafting of the new GC15.5 (including any changes we have made to the drafting).
- 4.75 The notification for the new GC15.5 can be found at Annex 2.
- 4.76 We set out further below how we consider all aspects of our decision meet legal tests that apply.

## The Approval Criteria, including KPIs

### Our proposals

- 4.77 The new GC15.5 requires a relay service provided by CPs 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 GC15.11 as a service that has been approved by Ofcom for the purposes of GC15<sup>95</sup>.
- 4.78 We considered that it was important to set out clearly and in advance the criteria by which we would assess a relay service submitted for approval, including the KPIs we would expect such a relay service to be capable of complying with. Therefore, the 2011 Consultation set out our proposed high level considerations regarding approval criteria for NGTR.
- 4.79 The 2012 Consultation summarised the responses to our high level considerations and set out in more detail the criteria that we proposed a relay provider must meet to become and remain an approved relay provider. We proposed the following criteria by which we intended to base our decision on any future approval of a relay service:

#### **Ability of the service to meet the requirements of the proposed GC15.5**

- The provider must provide an NGTR service fulfilling the relevant requirements in the proposed GC15.5.
- 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.

<sup>95</sup> The current approval can be found here:

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

- 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.

4.80 We also proposed the following KPIs:

| <b>Table of KPIs</b>   |   |
|--|---|
| <b>Measure</b>   | <b>Target</b>   |
| Standard relay calls answered within 15 seconds  | 90% on average<br>85% per 15 minute intervals <sup>96</sup>                             |
| Emergency relay calls answered within 5 seconds  | 95%   |
| Customers surveyed expressing dissatisfaction with the relay service   | <5% customers dissatisfied  |
| Standard relay calls abandoned <sup>97</sup>   | <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 averaged 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*

4.81 We proposed that any approval given by Ofcom would be conditional on that service being capable of meeting the agreed KPIs on an ongoing basis and should the service fail to meet the KPIs, Ofcom would be entitled to withdraw its approval. We explained that there is nothing to prevent relay providers offering higher service standards than those required to seek and maintain approval. We proposed to make the approval of a relay service conditional on the acceptance of KPIs in those, or in substantially similar, terms.

4.82 We considered that the proposed approval criteria were needed to ensure:

<sup>96</sup> 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.

<sup>97</sup> "Abandoned" means that the call is ended by the caller before the relay assistant is brought in.

- equivalence of access to relevant services 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.

4.83 We explained that the proposals in the 2012 Consultation constituted minimum requirements and were based on the proposed GC15.5 in the 2011 Consultation. The proposed approval criteria and KPIs were 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. We asked stakeholders if they agreed with the approval criteria and KPIs put forward in the 2012 Consultation.

### Stakeholder responses

4.84 In general, the majority of respondents to the 2012 Consultation, including disability stakeholders, CPs and Reach 112 agreed with the principle of the approval criteria. Respondents to the 2012 Consultation also agreed with the principle of KPIs. CPs generally considered the KPIs to be appropriate and proportionate, and Sense and NDCS (disability stakeholders), said that in the absence of competition or choice of relay providers, robust KPIs play a vital role in ensuring a high quality service, that moves with technological developments.

4.85 In the 2012 Consultation we commented that “Sense recommended we use the KPIs already in place as these performance indicators were designed to maintain the quality of the existing service”. However, Sense wished us to make clear that their comment was made specifically in relation to maintaining the current minimum level of accuracy (of the transcribed information in relay services) by using the KPIs already in place.

4.86 Respondents to the 2012 Consultation raise a number of specific points regarding the drafting of the approval criteria and the KPIs. We have carefully considered all the responses received from stakeholders and the key comments and our response are set out below. In a number of instances we have decided to make amendments to the text of the approval criteria and KPIs in light of consultation responses. In all cases we are satisfied that the changes we have made reflect the policy considerations underpinning our decision to adopt NGTR.

### Approval criteria: confidentiality

Our proposal

4.87 The first category of criteria stipulated that

“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”.

Stakeholder responses

- 4.88 BT requested that the criteria regarding confidentiality be less prescriptive as the current drafting did not cover all possible situations e.g. bomb threats or cases of criminal activity. BT did not consider this would undermine the confidentiality of conversations made via the relay service.

Our response

- 4.89 We have amended the drafting of the requirement in light of BT's comments. The drafting allows relay provider some extra flexibility in order to record calls for justifiable operational reasons such as emergencies or cases of criminal activity.

Approval criteria: accountability and transparency regarding the performance of the service:

Our proposals:

- 4.90 The fourth category of approval criteria related to the accountability and transparency regarding the performance of the relay service. The criteria required an annual report to be published and regular customer satisfaction surveys to be carried out. As explained in the 2012 Consultation we did not propose to include outreach or requirements to develop new technology in the criteria. We considered that outreach activity would go beyond the provision of communications services and are therefore not an appropriate subject for the approval criteria. Moreover, imposing technological developments that drive costs for communications providers would need to be considered by Ofcom as part of an impact assessment, rather than automatically introduced. We also did not propose to include a requirement for regular reviews of the KPIs as we did not consider that this would be appropriate. Instead we intended to monitor technological developments and work with stakeholders and relay providers to understand any market developments which could have consequences for relay services.

Stakeholder responses

- 4.91 UKCoD/TAG, NDCS, Action on Hearing Loss, PhoneAbility and Sense considered that the criteria should require the KPIs to be reviewed regularly to ensure the service is improved and in line with technological developments. Action on Hearing Loss said that with the removal of USC4 there was no business incentive for relay providers to reduce call length through increased transcription speeds. NDCS considered that the customer satisfaction survey should be run on an annual basis, with liaison with deaf organisations, and results acted upon. NDCS also considered that Ofcom should establish a consumer panel, including deaf young people, to review the results of the KPIs and customer satisfaction surveys, Action on Hearing Loss and UKCoD/TAG said the development and monitoring of the criteria should require outreach and the involvement of deaf users.
- 4.92 BT did not consider that a specific requirement on outreach activity or specific research and development activity was required. BT also requested that the requirement for the relay provider to carry out customer satisfaction surveys be removed with the obligation to carry out surveys falling instead on all CPs.

Our response:

- 4.93 We consider that the relay provider should be required to carry out robust customer surveys of their users at least every two years<sup>98</sup>. This is an important part of measuring whether the service provided secures the required equivalence of access (in terms of matters like demand for use of and satisfaction with, the service). In relevant years we would expect the annual report which relay providers will be required to publish to include a summary of the results of customer satisfaction surveys carried out. We consider that the most effective solution is for the relay provider to carry out the customer satisfaction surveys rather than requiring all CPs to carry out surveys.
- 4.94 We acknowledge respondents' views on the need to review the approval criteria and KPIs on a regular basis. As mentioned previously in this Statement, we intend to monitor technological developments and will continue to work with stakeholders and relay providers to understand any market developments which could have consequences for relay services. We will review the KPIs in light of any significant technological developments or any evidence e.g. of changing demand, available from the customer satisfaction surveys or annual reports carried out by the relay providers.
- 4.95 As stated in the 2012 Consultation and at paragraph 4.90 above we do not consider it appropriate to include requirements for outreach or development of new technology in the approval criteria. Our reasons are set out above. However, there is nothing to prevent relay providers from carrying out research or outreach independently of meeting the approval criteria. Ongoing consultation with deaf users will be achieved via the customer satisfaction surveys, and via Ofcom's engagement with expert panels, including the Communications Consumer Panel and the Advisory Committee on Older and Disabled People.

#### Approval criteria: Request for additional approval criteria:

##### Stakeholder responses

- 4.96 We also received requests for additions to the proposed approval criteria:
- Sense requested that the criteria also include requirements as to the quality of training for relay assistants and that they should require higher resilience than for standard voice calls.
  - MBG requested that the criteria also include a requirement for the relay service to be cost effective from the perspective of all parties in lieu of competitive pressures, and a requirement for the relay service to offer the "app" which allows mobile access to the relay service.

##### Our response:

- 4.97 We consider that the approval criteria already sufficiently cover quality of training and service resilience and that further changes in these areas are not required because:
- The criteria already require that the relay provider ensures 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, that emergency calls are prioritised, and that there are sufficient funds, facilities and staff to enable it to provide the service and the administrative and technical work associated with the providing the service.

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<sup>98</sup> For example by conducting the research over a period of time rather than in just one week.



- The criteria require that the relay provider must also ensure that staff are appropriately and adequately trained, especially in the communications needs of deaf, hard of hearing, speech impaired and deafblind textphone users. This, in conjunction with the requirement to carry out regular customer satisfaction surveys, should ensure the quality of training for relay assistants.
- 4.98 In relation to MBG's requests, the 2011 and 2012 Consultations set out that if an app was developed and provided it would allow smartphone users easier access to NGTR. We do not intend to specify who should provide an app as we consider that there is sufficient incentive for a relay provider to ensure its service can be accessed by different types of use (e.g. for use via fixed and mobile telephony). This is demonstrated by BT's confirmation that it intends to develop an app for smartphones. For the reasons given in Section 3, we have not included provisions relating to the charges that the relay service can apply for wholesale access.
- 4.99 As set out in paragraph 3.63 above, participants in the technical workshop identified the need, should more than one relay provider be approved, for relay providers to liaise with one another. This was felt to be of particularly important in relation to removing the need for a prefix for incoming calls to hearing and/or speech impaired users. In such cases, multiple relay providers will need to communicate with one another over the numbers allocated as relay numbers to ensure relay services are interoperable with each other. Therefore we have added a requirement to the approval criteria that approved relay providers have adequate measures in place to ensure relay services are interoperable with other approved relay providers.

### KPIs: transcription speeds

#### Our proposal

- 4.100 Two of the proposed KPIs in the 2012 Consultation related to transcription speeds. One KPI was the current per call voice to text transcription speeds (with a target of >40 wpm where the user is able to receive 40 wpm or faster). The other was a new average voice to text transcription speeds (with a target of at least 60 wpm averaged across all calls). The proposals were in recognition of likely improvements to conversation speeds associated with NGTR and to guarantee the current practice as a minimum.

#### Stakeholder responses

- 4.101 As discussed in paragraphs 4.9 and 4.45 above, a number of disability stakeholders strongly opposed the transcription speeds proposed in the KPIs. They considered that the KPIs for speed of transcription should be at least 125wpm (as speeds would be closer to standard voice calls) and recommended that the speeds could then be slowed down for users as required (e.g. for deafblind users). They considered that for users making use of both the voice and text elements of the call, it is crucial that the speech and text elements are as closely synchronised as possible. They considered that transcription speeds of 60 wpm were not equivalent and did not represent a captioned relay service.
- 4.102 BT welcomed the fact the KPIs did not mandate the use of speech recognition software as it considered that such developments should be part of a commitment of continuous improvement and testing of technological innovations.
- 4.103 MBG recommended that the proposed transcription speeds remain unchanged until NGTR can be assessed. MBG considered it is too early to say if relay assistants will

be able to transcribe more quickly when no one knows whether the technology will be able to keep up, particularly when some of the factors are going to be beyond the platform provider's control (i.e. the data element being delivered by the Internet).

Our response

4.104 For the detailed reasons given above at paragraphs 4.48 to 4.60, we have decided not to amend the speed of transcription KPIs at this stage and nor are we mandating the use of speech recognition technology.

#### KPI: Call handover

Our proposal

4.105 We proposed to introduce a KPI for calls being handed over to another relay assistant during the call, for instance due to a shift change or emergency call. This KPI ensures minimal disruption for both parties involved in relay calls, whilst recognising 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.

Stakeholder responses

4.106 We had two responses in relation to this KPI:

- Sense wanted the KPI for call hand over to avoid any call hand over for deafblind users.
- BT asked for the proposed KPIs for "Total calls to be subject to a handover" to be clarified to read "Total calls to be subject to a relay assistant handover".

Our response

4.107 As set out in our 2012 Consultation there is a genuine need for some calls to be handed from one relay assistant to another during the call due to, for instance, emergency calls or a shift change. The KPI ensures minimal disruption for both parties involved in text relay calls and we do not consider that it would be appropriate to single out one class of user in the KPIs and apply different standards to those calls.

4.108 We consider BT's suggestion to clarify the KPI from "Total calls to be subject to a handover" to read "Total calls to be subject to a relay assistant handover" is sensible and reflects our objectives. We have amended the KPI accordingly.

#### KPIs: Additional requests

Stakeholder responses

4.109 In the 2012 Consultation we proposed that any approval given by Ofcom would be conditional on our view that service was capable of meeting those KPIs on an ongoing basis. We explained that should the service fail to meet the KPIs, Ofcom would be entitled to withdraw its approval. In response, BT recommended that to be transparent, Ofcom should set out what happens if KPIs are not met including the process to remedy complaints, the timeframe that will be permitted for improvement and further quality review by Ofcom. BT suggested that the process include a

requirement for the relay provider to demonstrate an ability to meet the required KPIs within a 3-month timeframe through independent speed and accuracy analysis, an independent audit of reported KPIs, and independent mystery shopping and customer satisfaction surveys.

4.110 Reach 112 said that:

- Abandonment rates should take account of mis-dialled calls rather than calls abandoned because the service provider did not answer their calls quickly enough.
- KPIs on banded speed of answer (e.g. calculated to 15sec, 30sec, 60sec) provide a better indicator of the range and the tail of the speed of call distribution.
- Clearer guidance should be provided on what constitutes an error in transcription.
- The quality of service issues which can arise when calls or data/text are carried over broadband should be considered. Reach 112 has found that its Real Time Text (T140 standard and part of Total Conversation) can be significantly affected when packet loss reaches 2%, which is not an uncommon figure on contended networks. KPIs need to allow for detailed traffic measurement which will indicate problems occurring in the Internet, rather than in the service offered by the relay provider.

Our response

4.111 We do not consider that it is necessary to prescribe a particular process to deal with instances in which the relay service has failed to deliver its committed KPIs. Ofcom would expect to adopt an approach to the enforcement of CP's obligations under GC15 consistent with its published enforcement guidelines<sup>99</sup>. Given the number of different KPIs, and the potential reasons for them not being met, Ofcom will need to be flexible in its approach and assess issues on a case-by-case basis. However, Ofcom anticipates that in the majority of cases it would seek to address any problems in the first instance informally, such as via dialogue with relevant CP(s) and the relay provider(s).

4.112 In relation to the comments raised by Reach 112, we have set out the minimum KPIs which a relay service must meet in order to seek and maintain approval from Ofcom. The proposed KPIs allow for some flexibility of service provision. So as long as the relay provider meets the approval criteria, it will be for them and the CPs who use the service on whom the obligations in GC15 fall, to determine how best to provide the relay service. The approval of a relay service is conditional on the acceptance of KPIs in those, or in substantially similar, terms. This allows for some interpretation by relay providers. Therefore, should a relay provider have any issues such as those raised by Reach 112, we could discuss these with the relay provider during the approval process.

## Conclusions on the approval criteria and KPIs

4.113 The paragraphs above have considered the key submissions from respondents about the drafting of the approval criteria. In the light of the consultation responses received we have decided to proceed with approval criteria and KPIs in the form described at Annex 4.

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<sup>99</sup> <http://stakeholders.ofcom.org.uk/consultations/draft-enforcement-guidelines/enforcement-guidelines/>

- 4.114 Section 49 of the Act sets out the legal steps that Ofcom is required to take 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.
- 4.115 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), we intend to assess applications for approval by reference to the ability of the proposed relay service to comply with GC15.5. Applications for approval should, therefore, address each of the requirements in 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. We consider that the approval criteria adopted complement the new GC15.5 requirements, in that we would use them to help us determine whether a service would meet those requirements, would secure the required equivalence of access in line with CP's obligations and should be approved<sup>100</sup>. The purpose of these criteria is to ensure that the NGTR service satisfies the basic principles set out in any GC, and the underlying objective of equivalence of access, and does so in a way that is robust, resilient, accessible and transparent.
- 4.116 We consider that the approval criteria 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 insufficiently funded and staffed service will 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.
- 4.117 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. The proposed KPIs allow for some flexibility of service provision. As long as the relay provider meets the approval criteria and KPIs it will be for them to determine (in conjunction with any CPs using the service to meet their regulatory obligations) how best to provide the relay service. Equally, there is nothing to prevent relay providers offering higher service standards than those required to seek and maintain approval. The approval of a relay service is conditional on the acceptance of KPIs in those, or in substantially similar, terms. This allows for some interpretation by relay providers. We consider that KPIs can effectively support the approval criteria and the requirements of the new GC15.5 and can be an effective

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<sup>100</sup> 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.

way of ensuring that any NGTR service meets certain minimum requirements to ensure a robust and resilient service to users.

- 4.118 The approval criteria and KPIs do not discriminate between relay providers, or potential relay providers, as they will be applied consistently to all applications received. In setting out the approval criteria and KPIs in advance, they meet the requirement of transparency.
- 4.119 In the context of the future approval of an NGTR service, we consider that the approval criteria and minimum KPIs 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.

## Implementation period: When will NGTR take effect?

### Our proposals

- 4.120 The 2011 Consultation proposed an 18 month period for NGTR to be implemented. This period took account of the analysis by external consultants ICC<sup>101</sup> and included sufficient time to prepare all the 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 and approving relay providers.
- 4.121 We sought further advice from ICC in light of the responses by from CPs to the 2011 Consultation, which had suggested that CPs would need longer than 18 months if a CP needed or wished to provide its own relay service. ICC<sup>102</sup> considered that, in such circumstances, an implementation period would not be significantly greater than 18 months. The 2012 Consultation also set out further details of how CPs could provide relay services, the potential costs associated with them and BT's decision to provide relay services on a wholesale basis. These issues are detailed above in section 3. We also hosted a technical workshop for CPs to help their understanding of what the change to NGTR might require of them and the costs associated with that change.
- 4.122 We asked stakeholders whether they agreed that a period of up to 18 months for the implementation of NGTR was appropriate.

### Stakeholder responses

- 4.123 In response to the 2011 Consultation, there was no consensus between respondents on the implementation period for NGTR:
- Three relay providers and most CPs (BT, the MBG, Sky, Cable & Wireless, Telefónica, and UKCTA), considered that 18 months was likely to be the minimum necessary to implement NGTR as they would have to develop, test and implement systems and technologies capable of interoperating with the new platform. Some CPs also considered that the implementation period needed to include changes to any billing platforms, co-operation with equipment providers and training of staff. Sky considered that an implementation period of 24 months was more realistic.

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<sup>101</sup> See Annex 6 of 2011 Consultation

<sup>102</sup> See Annex 6 of the 2012 Consultation

- As discussed above, many CPs stated that in the event that BT did not provide NGTR on a wholesale basis and CPs were required to implement a new NGTR service, CPs would need more than 18 months to implement a new solution regardless of whether it was built in-house or by contracting with an Ofcom-approved relay provider.
- In contrast, two relay providers (Significan't and Reach 112), many disability stakeholders (including DAART, UKCoD, TAG, NDCS and BDA) and some individual respondents considered an 18 month implementation period was too long. Many considered that a 6-12 month period would be more appropriate if technologies other than NGTR were considered, as many off-the-shelf services were already available. NDCS in response to the 2012 Consultation considered that NGTR should be available much sooner than 18 months given the delay to the statement and the time given to how the service will be delivered. The Reach112 project gave the example of its Total Conversation software which already integrates with BT's current text relay service and argued that 18 months for transition was therefore unnecessary.
- TAG and BDA also suggested that there would be value in running a pilot NGTR scheme to be conducted to help increase a wider understanding of associated costs and take-up, and to help tease out any technical issues. Significan't also considered that a pilot scheme of at least three years would be necessary to collect sufficient data to enable a better model for newer forms of relay services.

## Our response

- 4.124 Our aim is to ensure that NGTR is implemented as quickly as possible in order for its benefits to be realised by those with hearing and/or speech impairments. However, it is also necessary and important to take into account practicalities associated with implementing such a service efficiently and to ensure that NGTR is implemented to a high and robust standard. We acknowledge that the consultation to statement period has taken longer than expected which means that the final implementation date for NGTR has been put back. However this has no impact on the amount of time needed to allow CPs to implement and provide access to NGTR.
- 4.125 In response to the comments from CPs about the potential changes required to systems to implement NGTR, the 2012 Consultation set out further details of how CPs could provide relay services, the potential costs associated with them and BT's decision to provide relay services on a wholesale basis. These are detailed in section 3. We also hosted a technical workshop for CPs to help their understanding of what the change to NGTR might require of them and the costs associated with that change. We sought further advice from ICC in light of the responses from CPs to the 2011 Consultation that CPs would need longer than 18 months should a CP need or wish to provide its own relay service. ICC<sup>103</sup> did not consider that in such circumstances an implementation period would be significantly greater than 18 months. Therefore we do not consider that an extension to the implementation period would be required under such circumstances.
- 4.126 We consider that 18 months remains an appropriate period for implementation of an NGTR service. This period takes into account the need to tender for customised solutions based on integrating new hardware and software with the existing service and appropriate testing of the service before it goes live to customers. This period also takes into account the need to ensure that there is no impact on emergency

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<sup>103</sup> See Annex 6 of 2012 Consultation

calls and the implementation period takes account of testing, with the existing text relay service remaining available until NGTR is offered. It similarly takes account of the time that will be required to secure Ofcom's approval of a NGTR service.

- 4.127 However, as set out earlier, BT has committed to providing its NGTR service on a wholesale basis and has started work to commission a supplier to build the relay service platform. Therefore there is a possibility that BT will provide its NGTR service in less than 18 months. Therefore we have amended the text of GC15.5 to include a requirement that NGTR be provided "*by no later than*" (18 months of this Statement). This enables the amendments to GC15 to be made immediately, and therefore enables relay providers to commence the approvals process, whilst giving CPs up to 18 months to comply with the new rules.
- 4.128 GC15.3 already requires, and will continue to require, all CPs to provide access to text relay services. We have reflected this obligation in the definition of "relay services" in the wording of new GC15.5. This now makes it clear that, until Ofcom has approved an NGTR service, CPs are required to provide access to the existing approved relay service. In order to comply with the obligation to provide access to an NGTR service CPs will need to ensure that there is at least one text relay provider in place, either by providing a relay service themselves or by interconnecting to another approved relay service. BT has committed to provide the current text relay service until its NGTR service is approved and will offer its NGTR service on a commercial wholesale basis, CPs will not, therefore, be prevented from complying with the requirements of the GC and users of relay services will have an uninterrupted service. Unless CPs (who currently interconnect to BT's text relay service) have made other arrangements, once BT's NGTR service is approved, CPs will interconnect with the NGTR service in order to remain compliant with GC15.3. Therefore, CPs should be prepared for the implementation of NGTR at an earlier date.

## Conclusions

- 4.129 Having given careful consideration to all of the consultation responses, including responses to both the 2011 and 2012 Consultations, and the evidence available to us, we have concluded that the existing text relay service suffers from a number of significant shortcomings, such that it is no longer fit for purpose in securing equivalence of access for hearing and/or speech impaired end users.
- 4.130 As set out in this Statement we have therefore concluded that it is necessary to act to comply with our EU and domestic law obligations to secure equivalence of access and that the appropriate way of doing so is to proceed with our proposals for NGTR. We are satisfied, based on the available evidence and consultation responses, that NGTR will secure equivalence of access for disabled end users and that, having regard to the costs and benefits identified in the 2011 and 2012 Consultations, it will do so in a proportionate way having regard to what is technically practicable and achievable at the present time. We have also decided, following the further analysis presented in the 2012 Consultation and the responses received, that it is appropriate to maintain the requirement that all CPs, both fixed and mobile, must provide access to a relay service. We have found that to do otherwise would be a retrograde step that risks depriving hearing and/or speech impaired end users from accessing the competitive and dynamic communications market in the UK.
- 4.131 Accordingly, we have decided to proceed with our proposals to revoke USC4 and to amend GC15, to include a new paragraph GC15.5. The formal notifications in this regard are at Annex 2 and 3.

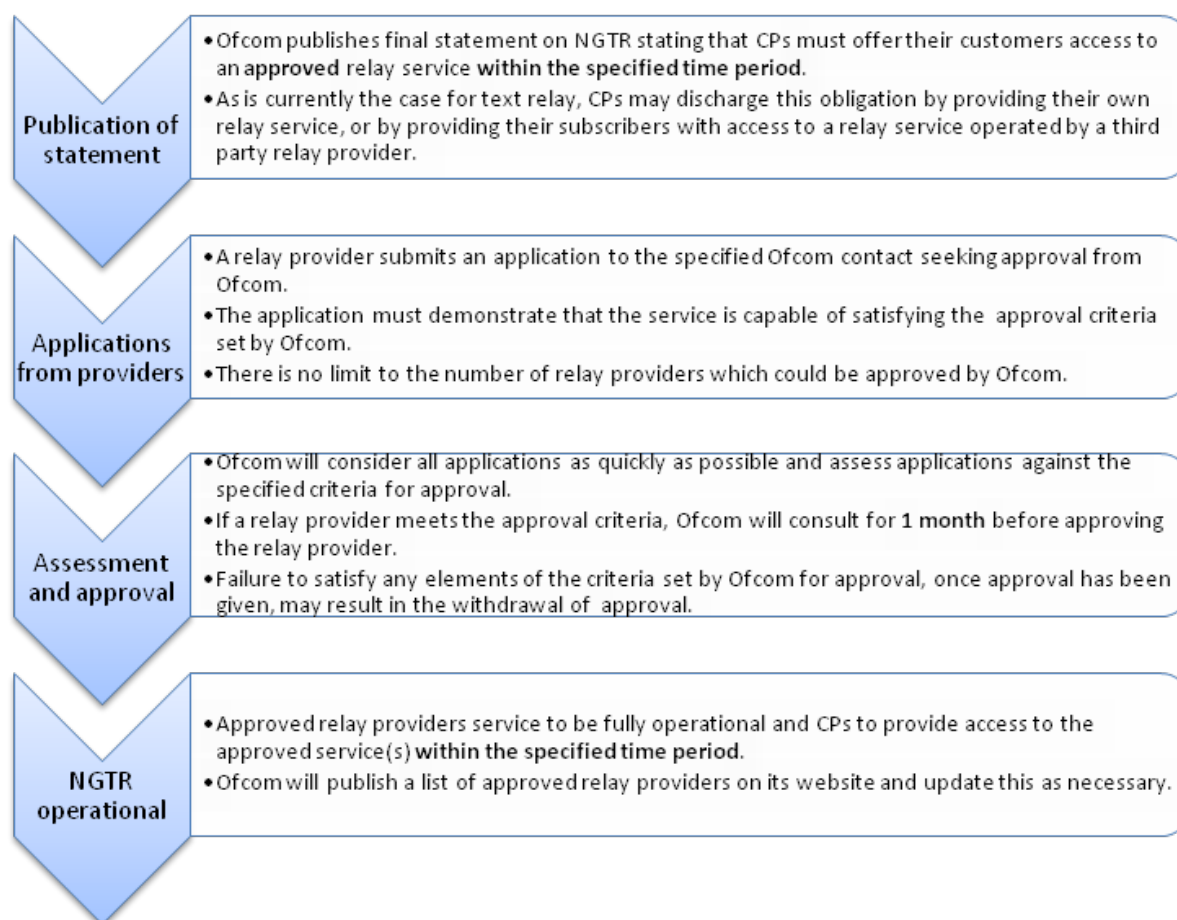
- 4.132 Section 47(2) of the Act requires, in relation to the modification of a GC, that the modification is objectively justified, non-discriminatory, proportionate (which we have considered alongside objective justification, as set out below) and transparent. This legal test is supplemented by the 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).
- 4.133 In the light of the matters addressed in the 2011 Consultation and the 2012 Consultation, and having given careful consideration to all of the consultation responses we conclude that our modifications to GC15 meet the criteria set out in section 47(2) of the Act, in that they are not unduly discriminatory. The requirement to provide access to a relay service meeting the necessary characteristics will apply to all CPs, which provide fixed and mobile PATS, for the reasons set out in this Statement. BT will no longer be subject to USC4, which means that all providers will be treated in the same manner.
- 4.134 We also consider that our decisions regarding NGTR are a proportionate means of securing the objective of equivalence of access for users with hearing and/or speech impairments (across fixed and mobile CPs). We acknowledge the inherent difficulties in quantifying the benefits associated with NGTR, but in our view, those benefits are likely to be commensurate with the costs to CPs. We consider that our decision to proceed with NGTR is a proportionate measure, imposing no more burden than is necessary, to secure the objective of equivalence of access, again as set out in this Statement. As to objective justification, we consider that requirement is met since, as we also set out, the existing text relay service (and the related regulatory requirements) do not secure the objective of equivalence of access. The requirements we are now imposing, in relation to NGTR, will meet this objective in relation to which Ofcom has its own regulatory obligations and powers.
- 4.135 We are satisfied that our decision is transparent, insofar as the nature and reasons for our decision are clearly set out in the 2011 Consultation, 2012 Consultation and this Statement.
- 4.136 Ofcom is further satisfied that the measure we have decided to take satisfy 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).
- 4.137 In addition, in so far as the same section 47(2) tests apply to our decision to revoke USC 4, or the principles behind them are relevant to that decision, we consider that they are met. We have explained in section 3 above why the retention of USC4 is neither appropriate nor required to secure the appropriate and proportionate the achievement of the proper regulatory objective of equivalence of access. This goes to each of the ideas of objective justification, proportionality and transparency. The decision to revoke the Condition is not unduly discriminatory since, again, it seeks to place BT in the same as other CPs (in circumstances which do not justify treating it differently).

## Approvals process

- 4.138 We consider that it is important for stakeholders to have an overview of the approvals process. We set out in the 2012 Consultation how we expected the stages of the approvals process to proceed. We think it is useful to reiterate the necessary steps in this process and therefore reproduce those details below. During the implementation period, Ofcom will work with CPs and relay providers seeking approval in order to monitor progress on implementation.



**Figure 3: Indicative stages of the approvals process**



## Annex 1

## List of respondents to our consultations

A1.1 There were 81 respondents to the July 2011 Consultation (responding to our text and video relay proposals) and 17 respondents to the May 2012 Consultation. The list below shows which stakeholders responded to each consultation. 'Confidential respondents' refers to those stakeholders who submitted a confidential response.

| Responded to July 2011 consultation | Responded to May 2012 consultation |
|-------------------------------------|------------------------------------|
| ACOD                                | Action on Hearing Loss             |
| Action on Hearing Loss              | BT                                 |
| British Deaf Association            | CWW                                |
| BT                                  | DAART                              |
| CWW                                 | Hearing Link                       |
| DAART                               | MBG                                |
| Employers' Forum on Disability      | NDCS                               |
| Hearing Link                        | PhoneAbility                       |
| MBG                                 | Reach 112                          |
| NDCS                                | Sense                              |
| PhoneAbility                        | Sky                                |
| Reach 112                           | UKCoD/TAG                          |
| Sense                               | UKCTA                              |
| Sign Health                         | FCS                                |
| Significan't UK Ltd                 | 1 confidential response            |
| Sky                                 | 2 individual responses             |
| Sorenson Communications             |                                    |
| SSE                                 |                                    |
| Telefónica                          |                                    |
| Three                               |                                    |
| TAG                                 |                                    |

Review of relay services

|                          |  |
|--------------------------|--|
| UKCoD                    |  |
| UKCTA                    |  |
| Vodafone                 |  |
| VRS Today                |  |
| 53 individual responses  |  |
| 3 Confidential responses |  |

## Annex 2

# Notification of modification to General Condition 15

## NOTIFICATION MODIFYING CONDITION 15 OF PART 2 OF THE GENERAL CONDITIONS UNDER SECTION 48(1) OF THE COMMUNICATIONS ACT 2003

### BACKGROUND

A. The Director General of Telecommunications published on 22 July 2003 a notification setting general conditions under section 45 of the Communications Act 2003 (the “**Act**”) which took effect on 25 July 2003. Since July 2003, the general conditions so set have been modified on several occasions and new general conditions have been set by Ofcom (collectively, the “**General Conditions**”).

B. Articles 7 and 23a of the Universal Service Directive require Member States to ensure that access to, and affordability of, certain communications services for disabled end users is equivalent to the level enjoyed by other end-users. General Condition 15 therefore requires providers of Publicly Available Telephone Services to ensure that subscribers that so require by reason of their disability are granted access to a relay service.

C. Ofcom has considered the extent to which General Condition 15 might be modified to improve the services available to disabled end users in light of technological developments in order to secure equivalence for those end users.

D. In accordance with the requirements of sections 48 and 48A of the Act, on 28 July 2011 Ofcom published a notification (the “Notification”) and consultation document setting out proposals to modify General Condition 15. Ofcom published a further, related consultation document on 30 May 2012.

E. A copy of the Notification was sent to the Secretary of State in accordance with the requirements of section 48C of the Act.

F. The Notification set out, by reference to the accompanying consultation document:

- Ofcom’s proposals to modify General Condition 15;
- the effect of those modifications;
- the reasons for making the proposals; and
- specifying a period of 12 weeks within which representations could be made to OFCOM about the proposals.

This was complemented by the further consultation document published on 30 May 2012.

G. In accordance with section 48A(6) of the Act, Ofcom has considered every representation made to it regarding its proposals to modify General Condition 15; and the

Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.

## DECISION

1. In accordance with section 48(1) of the Act, Ofcom hereby modifies General Condition 15 as set out in the Schedule to this Notification.
2. The effect of, and Ofcom's reasons for making, the proposed modifications are set out in the accompanying document.
3. Ofcom is satisfied that the modifications satisfy the requirements of section 47(2) of the Act.
4. In making these modifications, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.
5. In this Notification:
  - (i) "**Act**" means the Communications Act 2003;
  - (ii) "**General Conditions**" have the meaning ascribed in recital A above; and
  - (iii) "**Ofcom**" means the Office of Communications.
6. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in this Notification and otherwise any word or expression shall have the same meaning as it has in the Act.
7. For the purpose of interpreting this Notification:
  - (i) headings and titles shall be disregarded; and
  - (ii) the Interpretation Act 1978 shall apply as if this Notification were an Act of Parliament.
8. The Schedule to this Notification shall form part of this Notification.

Signed by Claudio Pollack



A person authorised by Ofcom under paragraph 18 of the Schedule to the Office of Communications Act 2002

**17 October 2012**

## SCHEDULE

### ***Modification to General Condition 15 of Part 2 of the General Conditions***

1. Renumber paragraphs 15.5 to 15.10 as paragraphs 15.6 to 15.11.
2. At 15.5 insert the following text:

“By no later than 18 April 2014 a Relay Service provided by the Communications Provider to its Subscribers pursuant to paragraph 15.3 must:

- (a) provide facilities for the receipt and translation of voice communications into text and the conveyance of that text to the terminal of End-Users of any provider of Publicly Available Telephone Services and vice versa,
- (b) provide facilities for the receipt and transmission of voice communications in parallel with text communications, allowing both channels to work in tandem to deliver near synchronous voice and text;
- (c) provide facilities for access to Emergency Organisations;
- (d) subject to Conditions 3 and 13.1, be available for lawful use by End-Users at all times;
- (e) be capable of being accessed by End-Users of the service from readily available compatible terminal equipment, including textphones, Braille readers, personal computers and mobile telephones;
- (f) not prevent End-Users from communicating with other End-users of other approved Relay Services;
- (g) provide facilities to allow End-Users, who because of their disabilities need to make calls using a Relay Service, to receive incoming calls via the Relay Service, without the calling party needing to dial a prefix;
- (h) insofar as reasonably practicable, allow for communication between End-Users of the service at speeds equivalent to voice communications;
- (i) take measures to ensure the confidentiality of communications between End-Users of the service;
- (j) comply with any directions in respect of the service which Ofcom may make from time to time; and
- (j) be approved by Ofcom for the purposes of this Condition 15.5.”

3. In paragraphs 15.2, 15.3, 15.4, 15.6 (as renumbered), 15.7 (as renumbered) and 15.9 (as renumbered), replace reference to “paragraph 15.9” with “paragraph 15.10”.
4. In paragraph 15.10 (as renumbered), replace “paragraphs 15.1 to 15.8” with “paragraphs 15.1 to 15.9”.
5. Replace (d) in paragraph 15.11 with the following text:

“(d) “Relay Service” means any service which:

- (i) has been approved by Ofcom to be a text relay service for the purposes of this Condition; and
- (ii) as of 18 April 2014 complies with the requirements of paragraph 15.5.”

## Annex 3

# Notification of revocation of Universal Service Condition 4

## REVOCATION OF UNIVERSAL SERVICE CONDITION 4 UNDER SECTION 48(1) OF THE COMMUNICATIONS ACT 2003

### BACKGROUND

A. The Director General of Telecommunications published on 22 July 2003 a notification (the “**2003 Notification**”) designating BT as a universal service provider for the purposes of section 66 of the Communications Act 2003 (the “**Act**”) which took effect on 25 July 2003. In the 2003 Notification, the Director General of Telecommunications also imposed universal service conditions on BT including Universal Service Condition 4 in relation to the provision of relay services for Textphone users.

B. Articles 7 and 23a of the Universal Service Directive require Member States to ensure that access to, and affordability of, certain communications services for disabled end users is equivalent to the level enjoyed by other end-users. Ofcom has considered the extent to which Universal Service Condition 4 remains necessary and appropriate for the purposes of securing equivalence for disabled end users.

C. In accordance with the requirements of sections 48 and 48A of the Act, on 28 July 2011 Ofcom published a notification (the “Notification”) and consultation document setting out proposals to revoke Universal Service Condition 4. Ofcom published a further, related consultation document on 30 May 2012.

D. A copy of the Notification was sent to the Secretary of State in accordance with the requirements of section 48C of the Act.

E. The Notification set out, by reference to the accompanying consultation document:

- that Ofcom proposed to revoke Universal Service Condition 4;
- the effect of that revocation;
- the reasons for making the proposal; and
- specifying a period of 12 weeks within which representations could be made to OFCOM about the proposal.

This was complemented by the further consultation document published on 30 May 2012.

F. In accordance with section 48A(6) of the Act, Ofcom has considered every representation made to it regarding its proposal to revoke Universal Service Condition 4; and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.



G. Ofcom is of the view that Universal Service Condition 4 is no longer required nor appropriate for the purposes of securing equivalence of access for disabled end users and has therefore decided to revoke Universal Service Condition 4 in this Notification.

## DECISION

1. In accordance with section 48(1) of the Act, Ofcom hereby revokes Universal Service Condition 4.
2. The effect of, and Ofcom's reasons for, the revocation are set out in the accompanying document.
3. To the extent they are applicable, Ofcom is satisfied that the revocation satisfies the requirements of section 47(2) of the Act.
4. In making its decision to revoke Universal Service Condition 4, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.
5. In this Notification:
  - (i) "**2003 Notification**" has the meaning given in recital A of this Notification;
  - (ii) "**Act**" means the Communications Act 2003;
  - (iii) "**Ofcom**" means the Office of Communications; and
  - (iv) "**Universal Service Condition 4**" means Condition 4 of Part 2 of the Schedule to the 2003 Notification;
6. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in this Notification and otherwise any word or expression shall have the same meaning as it has in the Act.
7. For the purpose of interpreting this Notification:
  - (i) headings and titles shall be disregarded; and
  - (ii) the Interpretation Act 1978 shall apply as if this Notification were an Act of Parliament.

Signed by Claudio Pollack



A person authorised by Ofcom under paragraph 18 of the Schedule to the Office of Communications Act 2002

**17 October 2012**

## Annex 4

# The Approval Criteria, including KPIs

## Approval criteria for the relay service

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

- The provider must provide an NGTR service fulfilling the relevant requirements in 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 should only be recorded, or parts of the conversation noted, where required for justifiable operational reasons e.g. an emergency call; cases of criminal activity, for quality measurement training.

### 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 for hearing impaired users.
- The provider must ensure that adequate measures are in place to ensure that the relay service is inter-operable with other approved relay services (where applicable) such that end-users are able to use the service to communicate with users of other relay services.

### 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 the table of KPIs 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 its 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 at least every two years.
- 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<br><br>85% per 15 minute intervals <sup>104</sup>              |
| Emergency relay calls answered within 5 seconds  | 95%   |
| Customers surveyed expressing dissatisfaction with the relay service   | <5% customers dissatisfied  |
| Standard relay calls abandoned <sup>105</sup>  | <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 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 averaged 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 relay assistant handover  | No more than 2% of total calls  |

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

<sup>104</sup> 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.

<sup>105</sup> “Abandoned” means that the call is ended by the caller before the relay assistant is brought in.

## Annex 5

# The Legal Framework

## Introduction

A5.1 Universal Service, including the provision of services for disabled end users, in the United Kingdom is secured through the legal framework of the Directive, the Act and the Order as implemented by Ofcom. This Annex sets out the legal framework applying to the provision of services for disabled end users which are to be secured under the framework before going on to consider the means by which they may be ensured.

## The Directive

A5.2 Originally enacted in 2003, the Directive was amended in 2009. As regards measures for disabled end users, the amended Directive did not change the substantive obligation on Member States to ensure the provision of equivalent access to relevant services. However, the means of implementation was amended so as to allow the possibility of imposing measures through GCs only.

A5.3 Article 3 of the Directive sets out the basic rules regarding the provision of universal service in the Member States. To this extent, it provides that:

“1. Member States shall ensure that the services set out in this Chapter are made available at the quality specified to all end-users in their territory, independently of geographical location, and, in the light of specific national conditions, at an affordable price.

2. Member States shall determine the most efficient and appropriate approach for ensuring the implementation of universal service, whilst respecting the principles of objectivity, transparency, non-discrimination and proportionality. They shall seek to minimise market distortions, in particular the provision of services at prices or subject to other terms and conditions which depart from normal commercial conditions, whilst safeguarding the public interest.”

A5.4 Article 7 of the Directive makes provision for specific measures for disabled end users as follows:

“1. Unless requirements have been specified under Chapter IV which achieve the equivalent effect, Member States shall take specific measures to ensure that access to, and affordability of, the services identified in Article 4(3) and Article 5 for disabled end-users is equivalent to the level enjoyed by other end-users. Member States may oblige national regulatory authorities to assess the general need and the specific requirements, including the extent and concrete form of such specific measures for disabled end-users.

2. Member States may take specific measures, in the light of national conditions, to ensure that disabled end-users can also take advantage of the choice of undertakings and service providers available to the majority of end-users.

3. In taking the measures referred to in paragraphs 1 and 2, Member States shall encourage compliance with the relevant standards or specifications published in accordance with Articles 17 and 18 of Directive 2002/21/EC (Framework Directive).”

A5.5 The effect of Article 7 is to require Member States to impose USCs to secure the provision of equivalent measures for disabled end users unless they have imposed a GC under Article 23a (contained in Chapter IV). The latter Article provides that:

“1. Member States shall enable relevant national authorities to specify, where appropriate, requirements to be met by undertakings providing publicly available electronic communication services to ensure that disabled end-users:

- (a) have access to electronic communications services equivalent to that enjoyed by the majority of end-users; and
- (b) benefit from the choice of undertakings and services available to the majority of end-users.

2. In order to be able to adopt and implement specific arrangements for disabled end-users, Member States shall encourage the availability of terminal equipment offering the necessary services and functions.”

## The Act

A5.6 The provisions of the Directive regarding the imposition of USCs are implemented in the United Kingdom through sections 65 and 67 of the Act<sup>106</sup>. Section 65 of the Act provides:

“(1) The Secretary of State must by order (“the universal service order”) set out the extent to which the things falling within subsection (2) must, for the purpose of securing compliance with Community obligations for the time being in force, be provided, made available or supplied throughout the United Kingdom.

(2) Those things are—

- (a) electronic communications networks and electronic communications services;
- (b) facilities capable of being made available as part of or in connection with an electronic communications service;
- (c) particular methods of billing for electronic communications services or of accepting payment for them;
- (d) directories capable of being used in connection with the use of an electronic communications network or electronic communications service; and

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<sup>106</sup> The Act was amended to take account of the amendments to the Directive (and other of the European electronic communications Directives) by SI 2011/1210 The Electronic Communications and Wireless Telegraphy Regulations 2011.

(e) directory enquiry facilities capable of being used for purposes connected with the use of such a network or service.

(3) The universal service order may contain guidance about matters relating to the pricing of things that the order says must be provided, made available or supplied.

(4) Before making or varying the universal service order, the Secretary of State must consult OFCOM and such other persons as he considers appropriate.

(5) Before making or varying the universal service order, the Secretary of State must take due account of the desirability of not favouring –

(a) one form of electronic communications networks, electronic communications service or associated facility, or

(b) one means of providing or making available such a network, service or facility

over another”

A5.7 Section 67(1) and (8) of the Act provides for Ofcom’s power to set Universal Service Obligations in accordance with the Order, as follows:

“(1) OFCOM may set any such universal service conditions as they consider appropriate for securing compliance with the obligations set out in the universal service order.

...

(8) In setting a universal service condition, OFCOM must have regard to any guidance about matters relating to pricing that is contained in the universal service order.”

A5.8 As regards the implementation of Article 23a of the Directive in relation to the ability to impose a GC for the provision of equivalent access to services, section 51 of the Act sets out the matters to which general conditions may relate. Insofar as relevant to this consultation, section 51 provides that:

“(1) Subject to sections 52 to 64, the only conditions that may be set under section 45 as general conditions are conditions falling within one or more of the following paragraphs –

(a) conditions making such provision as OFCOM consider appropriate for protecting the interests of the end-users of public electronic communications services;

...

(2) The power under subsection (1)(a) to set conditions for protecting the interests of the end-users of public electronic communications services includes power to set conditions for that purposes which –

...

(c) specify requirements in relation to the provision of services to disabled end-users.”

## The Order

A5.9 The Secretary of State has chosen to require Ofcom to ensure that such measures are in place for disabled users as follows, at paragraph 6 of the Schedule to the Order:

“6. - (1) Special measures shall be taken to ensure access to and affordability of publicly available telephone services for end-users with a disability equivalent to those enjoyed by other end-users.

(2) The measures to be taken for the purposes of sub-paragraph (1) shall include:

(a) provision of access to the directory information facilities provided for the purposes of paragraph 3 in a form appropriate to meet the needs of end-users with a disability who are unable to use a telephone directory in a form in which it is generally available to other end-users;

(b) provision of priority fault repair services to end-users with a disability as is necessary to ensure access to publicly available telephone services by such end-users;

(c) provision of, and the provision of access to, relay services for end-users with a disability where required to ensure access to publicly available telephone services by such end-users;

(d) methods of billing and methods of accepting payment for publicly available telephone services in an appropriate format for subscribers with a disability, including provision for such subscribers to nominate a third party to handle their billing issues; and

(e) accessibility and functionality of the public pay telephones to be provided for the purposes of paragraph 4 for use by end-users with a disability, including the adequate provision of textphone facilities.”

A5.10 In order to implement the provisions of Article 23a of the Directive to enable Ofcom to decide, where appropriate, to impose only a GC in order to secure equivalent measures for disabled end-users, article 3A of the Order provides that:

“3A. Where OFCOM has made a general condition under section 51 of the Act in relation to the matters in paragraph 6 of the Schedule, then OFCOM shall not impose a universal service obligation in respect of those matters.”

A5.11 The effect of all these provisions is that Ofcom has a general power to set a GC for the purposes of specifying requirements in relation to the provision of services to disabled end-users. However, where it would be more appropriate to set a USC,

this may only be done where Ofcom is required to do so by an Order of the Secretary of State (where Ofcom has not exercised its power to set a relevant GC).

## USC and GC

A5.12 Ofcom has ensured compliance with the Directive, the Act and the Order through a combination of GCs and USCs. USC4 for BT provides for a text relay service for disabled users as follows:

“4.1 Subject to paragraph 4.3 and the financial limits set in accordance with paragraph 4.4, BT shall provide the funds for the operation by a person or body (“the relay service provider”) of a Relay Service (“the service”) for all End-users of Publicly Available Telephone Services who need to use Textphones because of their disabilities, whether End-users of BT or of any other Communications Provider.

4.2 BT shall enter into an arrangement with the relay service provider on such terms and conditions as they both consider to be appropriate.

4.3 Nothing in this Universal Service Condition shall be construed so as to:

(a) require BT to provide or provide funds for any Textphones or other Apparatus on the End-user's side of the Network Termination Point; or

(b) prevent BT from recovering part of the value of any funds provided in accordance with paragraph 4.1 from:

(i) any of its End-users accessing the service, subject to paragraph 15.3 of General Condition 15; and

(ii) any other Communications Provider requesting access to the Service for the purpose of enabling that Communications Provider to comply with paragraph 15.3 of General Condition 15 in respect of its own End-users;

as long as the terms and conditions offered by BT for such access are fair, not unduly discriminatory, based on efficiently incurred costs that are directly attributable to the day-to-day operation of the service, and do not oblige any such End-user or Communications Provider to pay for facilities or services which are not necessary or not requested.

4.4 In the absence of contrary agreement between the Director and BT the financial limit applicable to each 12 month period beginning from 25 July 2003 shall be:

(a) for the first 12 month period, £12,368,748, and

(b) for each 12 month period thereafter, the successive amounts produced by increasing that sum year by year (that is to say,



cumulatively) by the percentage equal to the amount of the change in the Retail Prices Index during each previous yearly period.”

- A5.13 USC4 thus establishes a TR service to be provided by BT to its customers and, where appropriate, to other communications providers. GC15 applies to all communications providers and states, insofar as relevant to the provision of relay services:

“15.3 Subject to paragraph 15.9, the Communications Provider shall ensure that such of its Subscribers who, because of their disabilities, need to make calls in which some or all of the call is made or received in text format, are able to access a Relay Service. Such Subscribers shall be charged for the conveyance of messages to which a Relay Service applies at no more than the equivalent price as if that conveyance had been made directly between the caller and the called person without use of a Relay Service:

(a) except that the calling person may be charged standard local prices for the call made to a Relay Service provider in order to make a call irrespective of whether the call is successful; and

(b) applying a special tariff scheme designed to compensate Subscribers who need to make calls to which a Relay Service applies for the additional time to make telephone calls using a Relay Service.

15.4 Subject to paragraph 15.9, the Communications Provider shall ensure that any End-Users of its services who need to make calls to which a Relay Service applies:

(a) have access to Emergency Organisations, operator assistance services and a Directory Enquiry Facility using short code numbers; and

(b) are able to receive call progress voice announcements in a suitable form.”

- A5.14 The remaining provisions of General Condition 15 cover the requirements set out at (a), (b), (d) and (e) of paragraph 6(2) of the Schedule to the Order.

## Annex 6

## 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.  |
| Captioned 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.   |