Universal Service Obligation:
Deaf and hearing impaired consumers and text phone services

Research Study Conducted for

Ofcom

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Contents

1. Introduction

1.1 Background and Objectives

This presents the findings from a qualitative study into the provision of text relay services for deaf and hearing impaired consumers, conducted by MORI Social Research Institute on behalf of Ofcom, the communications regulator.

A text relay service allows text phone users to call phone users (and vice versa) via a third party operator who translates text to speech. A text phone has a keyboard into which messages can be typed and a display screen to read messages. They are used primarily by deaf and speech impaired users and anyone else who is unable to use a standard telephone.

Research was commissioned with members of the deaf and hearing impaired communities, in order to develop understanding about the usage of, attitudes towards, and perceived benefits of textphone services. The aim is to assess the operation of text relay services and gather views on their marketing.

These over-arching aims formed four specific objectives:

- Assess the needs of customers when it comes to Typetalk services;
- Understand the usage of and attitudes towards the current service, and identify gaps in the service in terms of content or communication of provision;
- Understand the extent to which customers are familiar with the service, its features and comprehension of the provider's communication;
- Investigate the potential methods of enhancing/extending the service (text, SMS, video, web-based communication).

1.2 MORI's Approach

In consultation with Ofcom, MORI Social Research Institute designed a combined methodology of mini-groups and depth interviews, in order to best meet the research objectives and to tailor the study to the requirements of the varied target communities, taking into account issues of sensitivity and practical involvement.

Mini-groups and depths permit focused investigation, particularly when language issues may make larger groups impractical and less productive. Groups and paired depths are particularly useful in allowing for an exchange of views between participants and for the testing of product concepts.

In order to capture the views of all text relay service users across the deaf and hearing impaired communities, three specific audiences were identified and targeted. These groups were:

- Hearing impaired non-signers – hard of hearing people in Manchester.
- Profoundly deaf signers – including both prelingually deaf and deafened participants in London.
- Profoundly deaf non-signers in London.

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These typologies reflect the broad range of text relay users, with their varied language skills and communication needs. In order that the groups and depths were accessible and inclusive to all, lipspeaker and sign interpreters were provided where appropriate, while the venue was equipped with a hearing loop.

In total two mini-groups, two paired depths and one individual depth interview were conducted within the London area. Interviewing did not take place in the North of England, the reasons for which are discussed in the *Evolution of the research* section below. The groups and depths were conducted at a central venue. All participants received an incentive for taking part and transport costs were provided.

The research comprised the following:

Fieldwork breakdown

	Focus group/ depth	Age group (years)	Interpreter	No. of attendees
Hearing impaired: non-signers	Paired depth	40-60	Lip-speaker/ hearing loop	2
Hearing impaired: non-signers	Single depth	18-30	Lip-speaker	1
Profoundly deaf signers	Mini-group	60+ years	Signer	6
Profoundly deaf signers	Mini-group	18-30	Signer	3
Profoundly deaf non-signers	Paired depth	18-30	Lip-speaker	2
Total participants	-	-	-	14

Source: MORI

Each group was conducted using a topic guide (see appendices), which acted as a starting point for discussion and ensured that key topics were discussed. However, the topic guide is just a guide, and where pertinent views and opinions arose spontaneously in the course of discussion these were incorporated and explored.

1.3 Recruitment channels

A number of different recruitment methods were used to ensure that different segments of the deaf and hearing impaired population were accessed.[1]

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[1] Footnote: according to RNID figures there are approximately 9 million deaf and hard of hearing people in the UK the majority of which experience mild to moderate deafness.

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A recruitment letter and questionnaire were faxed and emailed to organisations, which had been identified through desk research on the internet and by Typetalk conversations with organisations such as the RNID, DeafPlus, Royal Deaf Association, Hearing Concern and UK Hard of Hearing. A particular emphasis was placed on identifying 'low visibility' local clubs and associations, in addition to national organisations.

Over 75 organisations were approached directly and in addition a mail-out was sent to the DeafUK email distribution list, which represents over 450, deaf or hearing impaired individuals and organisations throughout the UK.

At a local level, specialist recruiters were commissioned by MORI to approach local organisations and services. This allowed a face to face approach with recruiters attending 'club nights' and distributing recruitment information. This also permitted a 'snowballing' of contacts, as members recommended acquaintances to approach. We also posted on as many websites as possible, and researchers themselves joined several discussion boards and chat groups where we spoke online with deaf and hard of hearing people.

This variety of methods encouraged an element of **self-selection**. Particularly in the case of the profoundly deaf, some members of the deaf community described themselves as politically active, and held 'campaigning credentials' and strong political opinions. The natural falling out of different levels of activism reflects the variety of views that exist within the deaf community, although it should be noted that the research generally reflects a cross-section of 'ordinary' opinion. This profile is reflected in the response to the product concepts we showed. Often, research among the deaf involves speaking with highly activist members of the community and the kinds of technologies under discussion may well provoke different responses.

Across the study as a whole and where practicable, a cross-section of age groups and backgrounds were recruited in order to properly contextualise the findings and permit a comparative analysis between the various groups..

1.4 Evolution of the research

Recruiting in the deaf and hard of hearing communities proved to be very challenging, and the process provided a number of lessons that were used to inform both the continuing research process and the research findings themselves.

- **Fluid self definition** – To an extent research definitions of disability are arbitrary. Each target community contains a wide variety of conditions and degrees. The identity adopted i.e. "profoundly deaf vs hearing impaired" or "signer vs non-signer", is often a choice made by the individual based on context, identity, politics etc, and changes according to the nature of discussion. Various participants chose to use a 'BSL/SSL identity' in certain parts of the discussion, by signing to us; but were also able to use an 'English based identity' by using lip-reading, at different points in the same discussion. This fluidity in definition is important for Ofcom the providers to consider when making provision for 'signers' and 'non-signers' in phone services.

- **Sliding linguistic spectrum not a clear definition** - Even when adopting an identity, there are overlapping traits. Those who do not use British Sign Language (BSL) as their first or preferred language used some element of signing in their communication at different

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times. Some are adamant they are multi-lingual, and will respond on the basis of whichever language they feel most fluent in that circumstance. The RNID assert that there are 50,000 to 70,000 signers in the UK: this is an estimate, and our recruitment process highlights the difficulty of pinning down figures for 'first or preferred language'. This recruitment issue also highlighted the difficulty in making provision for 'signers' and 'non signers' given that the response to provision may be mediated by political concerns as well as communication concerns.

- **Caution** – Many deaf groups and associations reacted with suspicion, when approached to take part, citing concerns over misinterpretation by the hearing community or past experience of being ignored. Ofcom, indeed, were contacted directly by participants who had been contacted at second- or third-hand by our recruiters, and asked explicitly about the legitimacy of the project. This is an unusual response to research requests!

- **Weaker sense of community** - Hard of hearing participants tend to associate less with a sense of 'community' and are harder to reach through snowballing. There appears to be a weaker identity than that found in the profoundly deaf community, plus fewer active local organisations.

- **T-switch** - Hard of hearing participants tend to use other communication solutions e.g. t-switch[2] rather than Typetalk and are less likely to own a minicom. There is also resistance to being pigeon-holed with the deaf community, and greater association with the hearing community, which makes recruitment based on usage more complex.

The recruitment issues themselves provide learning on the ways to identify and communicate with the target communities.

In a number of instances organisations and individuals were, after reassurances, keen to take part but were unable to attend on a specific date or were based in other cities or towns in the UK. In order to include their comments MORI prepared a short self-completion questionnaire, based on the topic guide and emailed or faxed this to three organisations: two representing the hard of hearing and one the profoundly deaf, and three individuals.

1.5 Interpretation of data

This project was a process of qualitative research designed to explain and uncover some of the types of usage, attitudes and mental constructs that exist in the deaf community. The research does not quantify these but rather seeks to provide useful insights into how some rational and emotional attitudes are adopted and held.

Qualitative research is designed to be *illustrative* rather than *statistically representative* and therefore, does not allow conclusions to be drawn about the extent to which something is happening. The research will be most useful in highlighting ideas and insights which can help in the development of

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[2] T switch is a switch in a hearing aid that when switched to 'T' position can pick up sound from listening equipment like a loop system or telephone receiver.

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services. It is not a substitute for quantitatively canvassing views across the target communities, about new service propositions. In addition, it is important to bear in mind that we are dealing with *perceptions* rather than *facts* (though strongly held perceptions do indeed form the reality of service provision for users).

Throughout the report, use is made of verbatim comments from participants. In the case of focus group verbatims, these may not always represent the views of the focus group as a whole, although in each case the verbatim is representative of at least a minority.

1.6 Report Layout

The report begins with an analysis of the attitudes toward, and communication behaviour of the target communities and emerging trends, before focusing on specific services first by looking at current provision text-relay services, and then exploring three service extension concepts:

- The Target and Communication
- Typetalk/Textdirect
- The Future: Service Extensions
- Conclusions

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1.8 Acknowledgements

MORI Social Research Institute would like to thank the numerous local clubs and associations for their help and advice in this project, as well as those people who participated in the survey.

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2. Executive Summary

2.1 Key findings

- Typetalk, the popular term for textphoning, is a familiar, convenient and well appreciated service. It remains the quickest way to contact the hearing community and resolve a call in realtime.

- Typetalk preserves the default normality of the telephone for the deaf community. It is however, perceived to be outdated and a one size fits all model of provision, behind modern trends towards personalisation and convergence technologies.

- Technical problems affect the usability of the service. It is largely unable to deal with call steering and answer-phones and operator shortages lead to calls being cut short or calls to the service unanswered.

- Typetalk conversations are perceived to lack emotional flexibility and spontaneity. Messages can often be long and formal with no opportunity for the deaf person to interrupt. The operator is an unknown quantity, often perceived as distant and mechanical, adding to the formal nature of the call and creating the impression that the emotional layer is absent.

- Service improvements look towards increased user control over the medium and content, which are tied to perceptions of independence and equality with the hearing community.

- Marketing and communications are well received when they value the deaf community as consumers in their own right, illustrating the range of services on offer and the practical benefits. Personalised and bundled services are recurring themes alongside clarity and emotional content.

- Services and marketing strategies are best received when developed with the advice and support of local deaf organisations. Suspicions remain that the hearing community develop solutions for situations as they perceive them, without consulting the deaf users.

- The hearing community may benefit from a campaign to raise awareness of textphone services. Most participants felt that the hearing community are wary of Typetalk calls. A textphone service designed to connect the deaf and hearing communities will be limited if either one is unfamiliar or unable to use it.

- Future service extensions reflect a compromise between an ideal service and practical offerings that work in the real world. The ideal is an organic multi-channel visual and text service that is owned by deaf community and convergent with other mediums, but not if this involves unproven technology that may lack the convenience and practicality of Typetalk.

- There is no need to replace the Typetalk service but there is strong desire for greater integration and connectivity with other

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technologies and for service providers to demonstrate that they value the deaf community.

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3. Typetalk Service

Overall Typetalk is a well appreciated service. It is familiar, accessible and still the most preferred way of contacting a hearing person. Participants feel that the immediate, default normality that hearing people experience when using a telephone is preserved by Typetalk.

> *I would not be able to communicate without Typetalk*
>> (Female 18 to 30 profoundly deaf non signer)

> *I use TextDirect everyday at work and I use it to arrange meetings and it's quite useful because you can get a quick reply.*
>> (Male 18 to 30 profoundly deaf signer)

> *I am very grateful for Typetalk*
>> (Female 18 to 30 hearing impaired)

As a basic service it is relied upon and has the mark of a tried and trusted brand. The TextDirect name is gradually filtering through though most still talk of text phoning as Typetalk.

All the limitations and complaints discussed throughout the research should be seen in the basically **positive** context of Typetalk appreciation. That said, it is important to remember that at present Typetalk is the only service provided specifically for the deaf community. The flexibility available through Typetalk is limited and this may contribute to a feeling that the deaf community is receiving a one size fits all service rather than communications solutions that are tailored to their needs.

3.1 Service limitations

Through focus groups and depth interviews three limitations were identified:

- technical process

- operator communication

- penetration levels

All of these problem areas are described in terms of both technical and emotional components. The common thread linking all complaints and comments is the need for **a feeling of independence and control of the communication tool.**

3.2 Technical Process

Participants experience problems getting through on the 18001/2 Typetalk service. A shortage of operators is experienced that leads to frustration and on occasion operators cutting off on long calls.

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> *Sometimes if there's a shortage of operators at the Typetalk end it rings, rings, rings, waiting to connect to Typetalk, meanwhile the person you're ringing has put the phone down. When the operator finally does come on the phone they say the other party has hung up…*
>
> (Female 18 to 30 hearing impaired)

Participants in both the old and young age groups experience difficulties with call steering. Participants feel that menu options on automated services are too fast for operators to relay back and for the caller to choose an option. This makes the whole process cumbersome and on occasion it becomes impossible to access services such as local councils or housing departments.

> *I always have problems when I phone say PC World, they have automated systems… Typetalk sometimes can't keep up, so that's my major problem. I used Typetalk but the system was going too fast and in the end the operator said to me 'sorry, they're talking too fast, I can't keep up'.*
>
> (Female 18 to 30 lip reader)

When calling answering machines participants feel that the caller does not have the option to cut off the call before it goes to machine. The hearing person has the option to disconnect a call at any time and not incur a charge.

> *…when you are contacting Typetalk and it's an answer phone you still have to pay. Hearing people if they hear an answering phone they just put the phone down, but if it's Typetalk you still have to pay.*
>
> (Male 18 to 30 profoundly deaf signer)

All of these technical difficulties can give rise to a **sense of inequality with a hearing person.**

3.3 Technical recommendations

- Participants would appreciate a **follow up** text message or an explanation for why calls are disconnected.

- In relation to call steering and answerphone services, two female lip reader participants suggested an option that allows one to **pre-prepare** a message to the Typetalk operator to inform them what the conversation would be about. This would make it easier for both caller and operator to negotiate official calls and automated services.

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3.4 Operator Communication

There is a perception among participants that operators are cold and neutral which makes for stilted communication. A female respondent claims that as a child she thought Typetalk was a large machine. This indicates that a bland and lifeless image of Typetalk does exist, which contributes to a certain feeling that a Typetalk conversation can be unnatural and stilted.

> *When I was younger, I used to think Typetalk was a machine. I've never met a person who worked with Typetalk so I always thought they were machines. Sometimes when I'm using Typetalk they've put me on hold. I ended up having a conversation with Typetalk and that was the first time it really hit me, they are humans beings. It would be good if you could actually see them and their work place.*
>
> (Female 18 to 30 lip reader)

Two participants were concerned that their emotions may not be communicated in the desired way. Deaf callers want to be assured that operators are not only relaying the content of messages, but also the emotions they are laden with.

> *When I'm on the phone to someone and I'm really angry, do they talk in an angry voice? If I put 'shout' in brackets do they really shout?*
>
> (Female 18 to 30 lip reader)

There is a perceived lack of privacy given the inevitable presence of a third party. Some participants expressed concern about confidentiality clauses in relation to bank details or legal inquiries. Participants feel there is a lack of information about the confidentiality and anonymity of the calls.

3.5 Operator recommendations

- On the one hand participants feel that operators are emotionally distant. They are concerned about whether the deaf person's emotions are being communicated accurately. On the other hand, participants feel that operators may be too invasive and a third party presence becomes a constraint to expressing themselves on their own terms. Guidance from the caller and the context of the call could be used to steer the **level of involvement** required by the operator.

- To create a more personalised service participants suggest including **information** about the Typetalk operators. One suggestion was for communications materials to carry a blurb about a Typetalk operator, their life, ambitions, and why they chose to work for Typetalk. This would raise the image of operators and the Typetalk service in general, making it seem more accessible, less mechanical with the objective of eroding the image of a cold and distant service.

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3.6 Penetration Levels

According to four participants there is a lack of minicoms in the workplace coupled with a lack of awareness of the service in the workplaces of the people they wish to contact. Using Typetalk at work becomes virtually impossible. In turn this makes other communication tools like MSN, fax, email and SMS more attractive, because of their accessibility and the normality of the computer rather than having to use an unusual 'special' phone. This is also indicative of the way participants devise their own communication strategies, to best suit their needs in different situations.

> *If I want to know something now … then I use Typetalk and find out the information now. Saying that though, if they're not picking up or I get the answering machine all the time, then I just go to email.*
>
> (Female 40 to 60 hearing impaired)

> *When contacting businesses and everything I always use Typetalk because that way I can have a direct conversation with someone. But if I'm booking a ticket or I need to go somewhere then I'll use fax because I can write it down, like writing a letter, that's quite good. Text messaging I use all the time with my family and with my friends, because I know that they've got my message straight away, they can reply to me and it's just really useful because most of my friends are deaf so we all use text messaging.*
>
> (Female 18 to 30 lip reader)

Typetalk messages are not as emotionally flexible as our participants would like them to be. Entire messages have to be read out before a response can be given. Conversations contain long messages with fewer exchanges, compared with a hearing person's conversation which is characterised by shorter more frequent messages. Participants feel that conversations become overly formal, especially as there are no options for interrupting a person. Again, feelings of inequality compared with a hearing person's conversation are expressed, due to this rather overly-structured method of communicating.

> *Sometimes when you want to interrupt and you want to say something, you can't interrupt because if you interrupt then you're typing and their typing comes up on the screen and it just comes up garbled. So I have to wait until they've finished.*
>
> (Female 18 to 30 lip reader)

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> *I have to say that I don't feel equal to hearing people when I use Typetalk*
>
> (Female 18 to 30 hearing impaired)

Participants feel that there is a lack of awareness about Typetalk among hearing people. A signer claims that when a hearing person receives a call from Typetalk they are told by the operator 'do you know how to use the BT Typetalk service?', and the response is often 'No thank you, I don't want any', as hearing people assume that BT is selling them a service. Most participants claimed that anecdotally they think hearing people refuse to take calls from Typetalk.

3.7 Service recommendations

- Areas identified as in need for improvement by deaf and hard of hearing consumers are all to do with the need for **user control over both medium and content.** It is both technical hitches and the perceived lack of an inherent emotional layer in Typetalk which creates a perception that the deaf user may lose independence and control. The ability to control medium and content plays a pivotal role in how the service is perceived by consumers.

    > *The good thing is that I can talk on the minicom for as long as I want, there are no time limits or anything. But the bad part to it is they don't know how I'm feeling, they can't see me, they can't hear me.*
    >
    > (Female 18 to 30 lip reader)

  Therefore any improvement which allows the user to **feel more equal** is welcomed. This may involve a stronger marketing programme among hearing people to ensure that Typetalk can be used more efficiently.

- Like any technology-savvy consumer, the deaf community express a desire to be courted with new services and more options to communicate with each other and the hearing community. The demand for better services sits on a continuum: a pragmatic need for basic, neutral services that work, and a desire for flashy customised communication solutions that impress, are equally relevant. Participants would welcome improvement in both directions.

- Deaf people prefer a basic communication service that will allow them to create a personalised communication solution, that is, the ability to use and link together a variety of communication tools like email to minicom or SMS to minicom.

3.8 Marketing communications

Currently communication materials from Typetalk can feel like a mixed blessing. On the one hand, participants get information because they have

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asked for it. They are, however, scathing about any claim Typetalk makes about service improvement, claiming that those are unlikely to be true. There is, then, a great deal of dismissal of any communication from Typetalk. On the other hand, so much do deaf consumers enjoy being treated like other customers (with a range of product and service choices laid before them) that there is a **latent enjoyment** of receiving sales and information leaflets and brochures. Our participants enjoyed tutting over sales gimmicks and dismissing offers they did not want to take up. Therefore the role of marketing communications may be to illustrate the range of services on offer and to present them in an interesting and flattering way.

The impression which came from this research was that innovative technologies (or uses of technology) tended to get adopted by the individual via word of mouth or personal coaching. This is in line with trends beyond the deaf community, trends relevant for society at large. There seems little need for deaf people to have services explained to them in different ways, but a greater need for the deaf to experience service provision in a similar way hearing people do.

However, among this target there is some wariness over the role of private companies in service provision for the deaf. Affiliations with organisations and charities and more specifically with local organisations would have more credibility.

However deaf people are particularly concerned about services and products being tested out on them. They are not used to feeling like valued customers, and there is a degree of scepticism about the intentions of large, "money spinning" private organisations.

> *But most organisations like BT or Vodafone, if they were doing it in conjunction with a charity then that would be OK for me because personally my first thought would be money, you don't really care about how this is going to help us, at the end of the day you just want to sell your product.*
>
> (Male 18 to 30 profoundly deaf signer)

> *It is better to contact the local organisations because they are in touch with their own members so it is better to contact the local level of organisations. You can send something but you don't know if they'll read it so it is better to promote it through the local organisations.*
>
> (Male 18 to 30 profoundly deaf signers)

There may, then, be a need for the organisations selling to deaf and hard of hearing people to ensure that they communicate their real links with the deaf community, as well as their ability to provide modern, innovative services.

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4. The Future: Service Extensions

There is a certain optimism in the response when we discuss the future. Sections of the deaf and hard of hearing community look towards a bright technological future. Technological innovation is expected to improve communications, through greater choice of devices and services and greater integration. These views are not just the preserve of the tech-literate, (although in their case it is more pronounced) but are shared by a cross-section of participants.

The bright future is already becoming a reality in the US, or at least that is the perception. In part this is due to a wider range of integrated services, such as the IP Relay service, but more fundamentally to a culture that is seen to be more deaf-friendly. A number of chat-rooms conversations mentioned impending US legislation that will ensure mobile phone companies' products are fully accessible.

> *Why is it that technology-wise everything is better over there [USA]? Their mobile phones have to be fully accessible for the deaf/hard of hearing soon under legislation. Are they just more disability-aware?*
>
> (Female member of a deaf newsgroup, via email)

> *But there's new technology. There's something in America where you can put it on your TV, but you must have Broadband, and you are confined to using your television screen. There's a type of web cam on top of your television screen that's nice and clear.*
>
> (Male 18 to 30 profoundly deaf signer)

Modular technology mainly centred around mobile phones came up as an interesting and potentially beneficial advance. There is also some interest in Wi-fi access.

Increased data speeds from broadband and the 3G network will bring about better video options. Most participants warmly welcome a service that could offer real-time video streaming of sufficient quality, screen-size and speed to enable signing and lip-reading. The RNID video-relay service trial, though not a huge success, is regarded as a step in the right direction.

There are, however, serious doubts about the specifications and quality of new services that may be **offered** to the deaf and hard of hearing community, especially video-relay based services. Participants are suspicious, concerned that new services may be foisted upon them by the hearing community, without consultation and without practical utility. Again, emotional idealism is tempered by pragmatic concerns - will it work and will it be expensive? It may be great to have the latest technology but if it is not proliferated, is prohibitively expensive or time consuming to use, then it is a step back, not an advance.

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> *They must involve deaf people at all levels. It might be fine setting up a new service for deaf people, thank you very much but I still think you need deaf people involved with it at the highest levels in the decision making process because it is for us, it's for deaf people.*
>
> (Male 60+ Profoundly deaf signer)

New services require thorough consultation and careful marketing, to ensure that the deaf community receive an end product that is beneficial and valued. Initial reactions to pricing strategies are hostile if they involve any change to the current 60% Typetalk discount. The immediate reaction is that subscription services stigmatise and, by asking deaf people to pay an additional fee for an equivalent service to a telephone, discriminate. However, for some, particularly younger people, services may feel more modern and exciting if bundled together with other offers (such as tariffs and broadband). This encourages a feeling that services are just as exciting as the services offered to hearing people.

> *There should be an automatic discount from BT from the bill anyway. Of course you can't control the internet but I know the American system they have an agreement with their main service provider that they had to provide service anyway.*
>
> (Male 18 to 30 Profoundly deaf signer)

> *The bill should be the same as for hearing people. Deaf and hearing people can buy broadband and then they could use it through the computer and pay the monthly fee to broadband. I wouldn't want to pay for a service that was expensive.*
>
> (Female 40-60 hearing impaired)

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Participants were asked to comment on three types of communication products. They were shown pictorial representations of the new products on A3 boards. The aim was to get participants reactions to communications tools
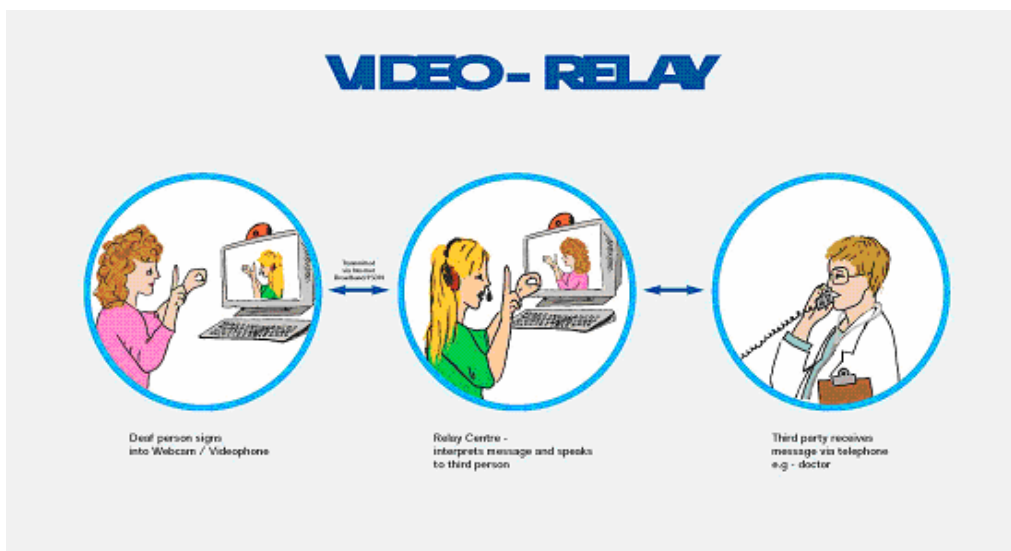
4.1 Product One: Video-relay

Fig 1: Video-relay[3]

The video-relay service concept received a positive spontaneous response. As already mentioned video based services are popular with segments of the deaf community. A visual element gives some deaf people a greater degree of control over their communications.

> *It would make communication easier and clearer because you could use your own language, basically it is more face to face and you'd be able to sign to the person, it would be clearer. You don't have to think about using English to type.*
>
> (Male 18 to 30 profoundly deaf signer)

> *Also you can interrupt as well with that, you don't have to wait your turn.*
>
> (Female 18 to 30 hearing impaired)

However, after consideration, the people we spoke to focused on the limitations of the concept and moved beyond the version suggested by the moderator to discuss revisions and reworkings that they would rather see.

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[3] Footnote: Stages of video-relay: deaf person signs or lip-speaks into Webcam/videophone, relay centre interprets message and speaks to third person. Third party receives message via telephone e.g. doctor.

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Video-relay does permit greater visual communication with the operator. It adds an emotional layer to that aspect. However, it fails to provide that connection with the **person contacted.** It is beneficial for some to see the operator and to feel closer to the process, but that is only a slim advantage over the existing verbal Typetalk service. A minority also preferred the operator to be anonymous and did not welcome them being 'brought into the conversation'.

It is worth noting that in the context of this project we spoke to people who were less likely to describe themselves as 'activists' than many who are vocal in the deaf community. This meant that our conversations uncovered the most pragmatic and least political way of thinking. However, because of the deeply politicised context in which provision for BSL users exists, there may be a need to add this service simply in order to allow people to move beyond text and have the choice of different ways to express themselves.

Almost all were sceptical about the practicality of the service. It was felt that high level sign interpreters and lip-speakers would be required to deal with 'accents', subtleties and dialects. According to a number of participants there is a shortage of interpreters in general and it would be expensive to train people and to pay them to be part of a 24/7 service provision. Nor is current technology able to support this yet, as the video-streaming would have to be clearer and speedier than it is currently to allow signing and lip-reading.

> *There are not enough interpreters to work that system. And there wouldn't be choice either. There are regional variations in sign language and if you had a London interpreter working there and it is somebody from up North for example they may not understand them, there might be misinterpretation.*
> (Male 18 to 30 profoundly deaf signer)

> *It would be very expensive for a qualified interpreter to sit in a room all day, and very boring for the interpreter to sit in a room all day and that's why something like this might collapse*
> (Female 18 to 30 profoundly deaf signer)

> *We are all deaf, we all sign differently, our communication is very different, we all went to different schools probably. I'd like to choose my interpreter, I'd choose a good one.*
> (Male 18 to 30 profoundly deaf signer)

Participants were interested in direct unmediated access rather than an operator service. At best the service is imagined without the operator, ideally with **visual contact direct to the other person**. The deaf person can then control tone and content, both to signers/lip-speakers and hearing people. A text channel would be provided for hearers and for deaf people who do not lip-read. The service could also operate through a web-cam and television for

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those without access to PC or who are not comfortable using computers. Television access is less daunting to the older deaf people involved.

> *As a social worker it would be good to see my clients.*
>
> (Female 40-60 hearing impaired)

> *I would love to see my daughter when I phone her. How about a minicom with a very big screen?*
>
> (Female 60+ profoundly deaf signer)
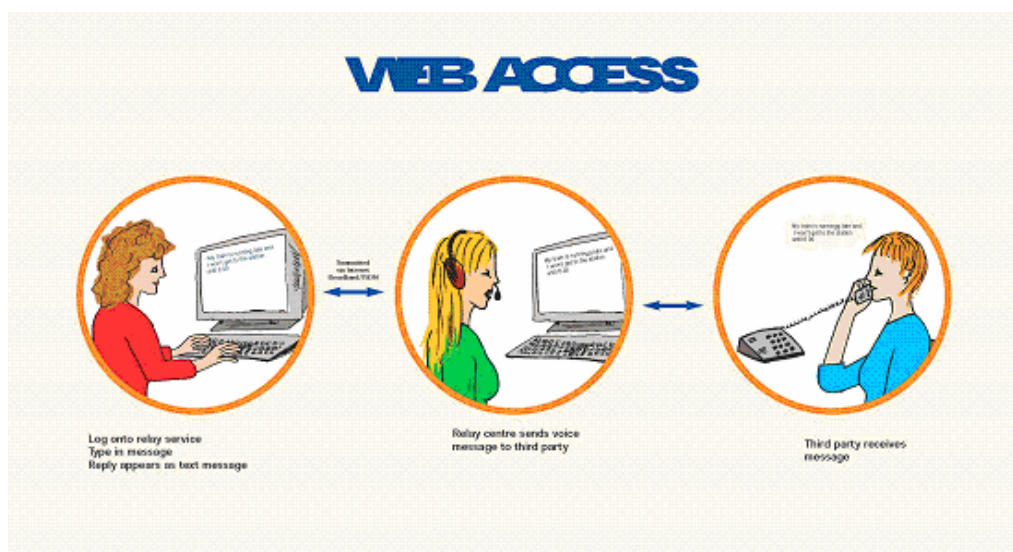
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4.2 Product Two: Web access

Fig 1: Web-access[4]

Web access is the most popular service concept of the three considered. The main reason for this is that it works alongside the existing and proven Typetalk service. There are also examples of existing services, such as Chattertext and the US based IP relay service, that operate in a similar way to the service concept.

> *Typetalk should become internet based like the IP Relay service in the USA, so we can ring anywhere in the world from anywhere in the world, via internet cafes, friends' pc's and while travelling.*
>
> (Male 40-60 profoundly deaf signer via email)

The presence of working examples and a greater familiarity with the service concept reassures participants that it is a practical offering with real utility for deaf people.

> *The only way to use TextDirect is to via a textphone. If somebody had the idea of using the web, www.typetalk or something like that it would be much easier and much better. There was a system in America, and British people got to hear about it and were able to tap into it but because they abused the system it was stopped.*
>
> (Male 18 to 30 profoundly deaf signer)

Internet access is available in a variety of locations, be it at work, internet cafés, airports, certain payphones, via some digital TV's and so on. By

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[4] Footnote: Stages of web-access: log onto to relay service, type in message; reply appears as text relay service sends voice message to third party. Third party receives message via telephone.

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making Typetalk much more accessible participants perceive that this service would lead to greater convenience, flexibility and mobility for deaf people.

The concept is not seen as a **replacement** for Typetalk but as a **complementary** service, and therefore suffers from many of the same limitations as well as some additional difficulties. One younger participant pointed out it involves booting up a computer and logging-on to a service, when sometimes all you want to do is to 'pick up the phone and make a call'. There is also a concern that unless the operator was to send a delivery receipt they would have no way of knowing if the message had got through.

> *Would they have to send you like a read receipt*
> *or some sort of notification?*
> (Female 18-30 profoundly deaf non-signer)

Overall, there is a feeling that Typetalk will need to begin evolving its service to fit the internet age. It sends the right signals that services are being up-dated, and bringing deaf people real value.

Web access is implicitly a practical service for the here and now, but PCs are also associated with the future of communications. From the research it appears there is a view (in the younger and more tech-literate parts of the deaf community) that the roll-out of broadband offers exciting opportunities for new services that are more attractive than the out-dated minicom.
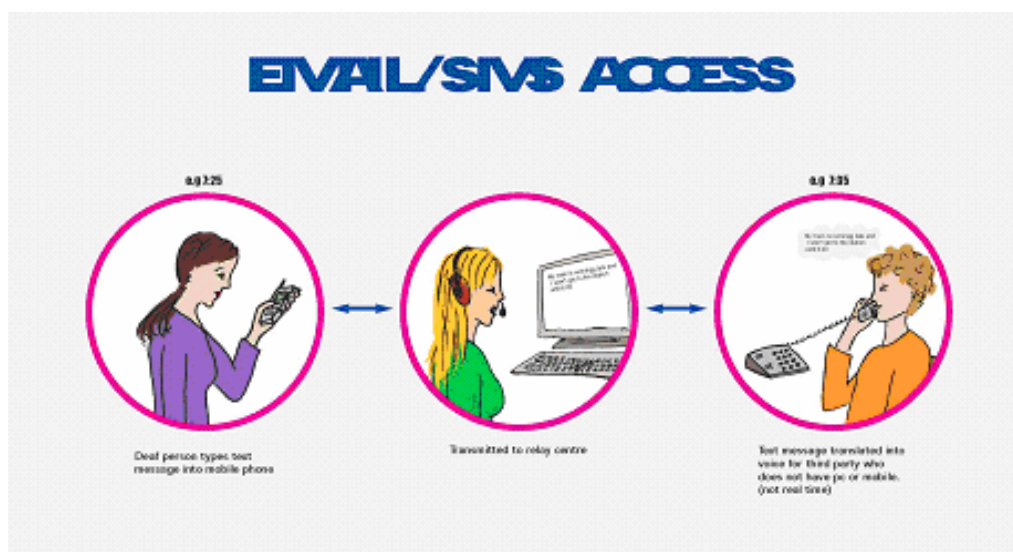
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4.3 Product three: Email/SMS access

Fig 1: Email/SMS access[5]

Email/SMS relay is felt to be less immediately useful. Participants focused on the SMS element with most regarding the email relay as an extension to, or replication, of web access, since some form of internet connection would be required.

In general the concept fell between two audiences and did not appeal directly to either. Older deaf people tend not to be mobile literate or own their own mobile handsets, relying on Typetalk and textphone services to communicate. Therefore they felt this concept was not really for them.

Younger deaf people, on the other hand, tend to use standard SMS messages to communicate factual, non-real time exchanges. It is imagined these are cheaper and quicker than a SMS relay message would be. Therefore our participants in this age group also felt that the concept was not fulfilling a need for them.

> *Yeah, everybody's got a mobile, and if I had mine they can text me back rather than use this.*
> (Female 18-30 profoundly deaf non-signer)

An 'emergency' service based on this model was welcomed by some participants, as a way to ensure that if they were out and about, they could still contact the emergency services or the hearing world if unforeseen circumstances occurred.

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[5] Footnote: Stages of Email/SMS access: deaf person type SMS message into mobile phone, message is transmitted to relay centre relay centre relay service sends voice message to third party. Third party receives message via telephone.

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> *Actually I would probably use that more in an emergency situation. I don't know but I just get the feeling that if I'm running really late for something, that would be fantastic. I wouldn't call just to have a conversation with someone. I'd wait until I got home.*
>
> (Female 18-30 profoundly deaf non-signer)

The most positive concept to emerge from the discussion was the idea of an integrated minicom texting/SMS service, without the Operator service. This would allow for quick, easy and controllable service. It was mentioned by one profoundly deaf younger person, that in cases of hereditary deafness the only **non-mobile owning** people they are likely to contact are older relatives who are also likely to be deaf, and therefore own a minicom. The idea of minicom to mobile services gave the impression that services for deaf people are taking 21st century communication habits into account.

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5. Conclusions

5.1 Targets' perceptions of identity impact on technical needs

Definition of deaf and hearing impaired can be blurred by participants themselves according to which groups they wish to fit into and which medium they wish to use for different sorts of communication.

Among both signing and non-signing groups a degree of politicisation does exist which affects their choice of text media or visual signing media. However, for all groups the visual channel is a vital aid to communication. It adds the emotional layer and restores control to the deaf person.

Deaf consumers see Typetalk services through the same lens they use to view other consumer technology. Hence broad consumer trends on tech adoption also applies to them. This is particularly apparent among young people.

Overall there is a need for **choice of communication channels and integration between them**.

5.2 Usage of Typetalk

Typetalk is still **central** to the lives of the profoundly deaf, as **the quickest way to contact a hearing person and resolve the call in real time.**

It is also important for those who may not be entirely deaf but wish to **minimise difficulty at work**, or who at various different times cannot use hearing aids.

There are however some complaints about details of the service:

Technical problems such as access to operators, cut off on long calls, and a perceived lack of improvement;

Operator problems- operators too busy, too neutral, too invasive, or poorly trained. In general the operator system is felt to be inflexible and participants would welcome the chance to 'steer' the operator more.

Problems with modern call steering in automated centres;

Lack of awareness of the service among the hearing community;

There is a general feeling among younger participants that Typetalk is an **essential but slightly outdated** service and **not up to speed with modern technology**. There is also a sense that the way it links with other services and media feels outdated in the era of broadband and technological convergence. There is a need to include mobile calls in the service easily plus include computer text communication.

Overall the decision to use Typetalk is often because there is **nothing better** when a quick response is needed. There seems little space in Typetalk currently for users to evolve their own ways of communicating- MSN, webcams and texting, by contrast, feel like services which are truly under the control of the individual user.

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5.3 Improving Typetalk

There is no burning need to replace or remove Typetalk, but there is a need to alter its **'old' image** to make it an appealing communication tool that can be integrated with a variety of other technologies. Therefore, the communication and marketing job that OfCom can do is as important to the target as concrete improvement to technical services.

Updating with new services before these become mainstream sends a message about the **value of the deaf community as consumers**, as well as providing for concrete communication needs.

Improvements to the current service could help to cut down on the current **minor frustrations**-

- Allowing callers to give operators more information prior to connecting a call. This is especially useful for call steering so the operator knows which options to select or information to provide a call centre operator.

- A provision for the deaf caller to interrupt the operator more frequently

- Continuing to improve technical reliability

- A way of informing consumers why cut offs happen or why operators change on long calls. A follow up text message would be appreciated.

- Some participants wanted more information about the operator: this could be included in marketing information.

5.4 Future Services

The ideal future services for our target would achieve the following ends:

- Multi channel allowing for visual and text communication
- Owned by the deaf community and controlled by them; organic services like MSN rather than operator-controlled ones. Ownership of service is the biggest practical and emotional need expressed by participants.
- Allowing for connectivity with current services/ devices e.g. SMS to minicom

Hence new services connected to the Typetalk offering might be:

- Video relay through TV with added text channel, signer to signer and signer to hearer communication

- Live web access to Typetalk

- Mobile to minicom or mobile text to landline textphone

The **inclusion of mobile telephones within** the Typetalk service is very important as more consumers have access to mobile phones. Mobile phones

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are at the centre of twenty first century communication, especially for the younger groups.

New services and improvements should be communicated in a tone which indicates that these are not just fun extras but reflect an understanding that users of these services rely on them for both clear informative content and a whole emotional layer of communication.

In order to allay suspicion, local groups and charities could be enlisted to help dissemination of new services. Service providers could work hand in hand with local organisations.

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Annex 1:The Target and Communication

This section addresses the channels of communication used by the target groups including both software and hardware and how these are integrated and combined into communication strategies.

Overall, the people involved in the research were more sophisticated in their approach to communication and more technologically aware than might be expected from a hearing person of a similar age and background. This is likely to stem from the greater need for communications solutions felt by both deaf and hard of hearing people.

Before addressing specific channels, it is worth outlining the over-arching themes which emerged from the research and which set the context for understanding the target's perceptions on communication and Typetalk:

- **Consumer technology mindset** – deaf and hard of hearing participants want to be treated, and feel, like 'standard' consumers, rather than as recipients of a specific set of services 'for the deaf'. There is a widely held view that new services, as well as existing ones, need to be packaged and marketed in an interesting and exciting way, which reflects the diversity of the target groups. This is in contrast to how current services are perceived, which most see as old-fashioned and 'one size fits all'.

  Just as hearing consumers are aware of marketed offerings, and respond to sophisticated and intelligent marketing in this category, deaf people too have a contemporary consumer mindset. Many drew comparisons with the 'bundled' telecommunication services that are provided for both landlines such as call waiting, SMS through landlines and varied mobile tariffs. It should be noted that this is more evident among the profoundly deaf, with their greater sense of identity and community.

- **Choice** – participants attach a great importance to having a choice of communication channels. A number of participants integrated devices and channels creating 'ad-hoc' communication packages that suit aspects of their lives and/or identities. The desire to personalise both software and hardware is evident, particularly among younger participants. Feeling forced to rely on only one particular channel often leaves participants of all ages feeling vulnerable and isolated.

- **Emotional and Pragmatic needs** – implicit in the groups and depths was a contradiction between a strong emotional calling for the latest technological developments and a pragmatic need for convenient working technologies. By providing innovative technologies, service providers act to reassure the deaf and hard of hearing that they are valued and respected consumers. This valorisation of deaf people is very welcome. Deaf consumers, however, do recognise the need for convenient, accessible services that integrate with existing hearing phones and landlines, and acknowledge that these might not be the flashiest systems.

Overall there is less of a demand for specific technical innovations and more for **innovative marketing and promotions** that motivate, flatter, but crucially do not

patronise. This illustrates that consumer demands and pressures are present for these participants, in the same way they are for everyone else.

A.1 Communication preferences

In same way that most hearing people use a variety of different communication devices, often depending on the nature of the communication or personal preference, so do the deaf and hard of hearing participants.

In a work context, participants tend to use a mixture of pagers, faxes, text to text communication via minicom text, email and MSN messenger, and Typetalk. Text to text communication is mainly used for non-urgent communication, such as arranging a meeting. MSN messenger was used by four participants to discuss complex topics in a real-time context with hearing colleagues, circumventing the need for an operator who might struggle to understand the subject-matter.

As minicoms are not always available at work, neither is Typetalk, but where it is provided by 'deaf friendly' employers it is used as the most convenient way to contact hearing people for queries that require instant responses.

Personal and home based communications tend to revolve around faxes, text to text via minicoms, email, MSN messenger (sometimes linked with a web-cam) and mobile SMS. It is quite common for participants to send an SMS message to friend or relative, hearing or otherwise, to get them to log on to MSN messenger for a longer 'chat'. Some participants had experienced an RNID videophone experiment, and were generally positive about the idea. However, the implementation of videophone services was problematic as callers needed to book a time at the centre, and quality was not always up to scratch.

> *Long distance I prefer SMS because if somebody's a long way away then it's much easier to text them or web cam, especially if they have a web cam obviously if they don't it's more difficult.*
>
> (Male 18 to 30 profoundly deaf signer)

Hard of hearing participants tended to use hearing phones with the t-switch setting for urgent communications with hearing people. They would rely more on other forms such as email when not under time pressure.

A.2 The age gap

Younger people (18-30) tend to use SMS, MSN and email for a greater range of communications and are more likely to ally these with picture attachments, webcams, MMS (multimedia messaging service) and the like.

> *I have conversations with family who live in Israel and in America. I can't just sit down and just sign normally, on the web cam you have to sign a little bit slower in order for the other person to see you because if you're just moving your hands all the time then it becomes quite blurred. It's good because with the minicom, you*

> *can't see emotion, but on the web cam I can see what
> they're feeling.*
>
> (Female 18-30 Hearing Impaired)

Middle-aged participants (40-60), who are more affluent and switched on to deaf products tend to have more sophisticated mobile and PDA devices, provided by work, and make use of MSN as well as webcams. Those who are not so technologically literate rely more on fax, as writing allows the personal touch.

Retired participants (60+ years) rely heavily on minicom text to text and Typetalk, which represents a life-line for quick, easy communication. They are aware of technology to a greater degree than their hearing age cohort, but still unlikely to own high-tech kit.

> *I'm never going to have a computer now. I'm just too
> old* (Male 60+ Profoundly deaf signer)

Across the age groups taking part, the enduring appeal and utility of Typetalk should not be underplayed. It is still the **most immediate and convenient way to contact a hearing person for a lengthy conversation**

A.3 Integrated Technologies

Some participants create personal communications solutions using a fairly sophisticated integration of devices, in one case by the use of Nokia 9210 communicator with T-Mobile and RNID software to create a mobile textphone. Other examples include the use of Chattertext CD-ROM to enable a computer to communicate via the minicom network, be it text to text or text to voice via Typetalk. This was however, limited in use due to the cost of the software.

> *There's another software that I should mention, it's
> called Chattertext and you download a CD ROM to
> your computer and you basically use the computer like
> the minicom.*
>
> (Female 18-30 profoundly deaf non-signer)

The process of integration is not simply a matter of using innovative technology but in most cases a matter of **using everyday technology innovatively**. Faxes and mobiles are used together with emails and MSN, as are pagers and mobiles.

> *I can feel my mobile buzz, but if the person calling me
> doesn't know I'm deaf, it doesn't work. So I get my
> mobile phone diverted to my pager and then I can text
> or email back.*
>
> (Male 60+ profoundly deaf signers)

Younger participants, in line with technology trends in society in general, expect more integrated provision, with a choice of tariffs, bundles of services and platforms which allow convergence. Implicit in this is a move towards a modular technology with communication devices linking to one another, as is currently occurring as Bluetooth devices become more popular in the community as a whole.

A.4 Text and beyond

The need for text based communication is strong in both the hard of hearing and profoundly deaf participants, but there is an **ambivalent attitude** towards it, which affects perceptions of the Typetalk service.

Text communication has the advantage of bringing signers and non-signers together. It is the only way both groups can communicate across any language divide. In addition, the ability to review past 'conversations' over SMS and email, helps some participants to keep track of their conversations and follow a train of thought.

> *I like to print out my MSN conversations, that way I can keep a record of what's going on with no hassle.*
>
> (Male 60+ profoundly deaf signer)
>
> *The text relay goes past so quickly you can hardly read it, let alone remember what it says.*
>
> *(Male 18-30 Profoundly deaf signer)*

On the other hand, for most, text lacks the impact of speech, signing and physical presence. Non-verbal communication is very important to participants and is one of the most effective ways to communicate emotion, something which text cannot emulate. In a practical sense text also presents problems to those whose first language is BSL, and use the grammer constructs of that language rather than English. This can make writing difficult and 'unnatural'.

> *My English isn't clear, I can explain it easily through sign language but in terms of written English, spoken English that's more difficult for me. I was brought up signing so that's obviously my preferred language*
>
> (Male 18 to 30 profoundly deaf signers)

Ultimately younger participants are incorporating a greater visual element to communication with the use of webcams, etc, and they are quick to express a desire for more visual devices.

Response to all the discussion topics and concepts shown indicated a strong belief that **communication is more than just words**. The ideal communication solution would involve a choice of channels. This is not restricted to younger deaf people only.

> *I'd like a television where you can make video phone calls.*
>
> (Female 60+ Profoundly deaf signer)

A.5 Minicom kitsch

Minicoms may be considered 'old technology' by many of the more technology literate participants, but there is still a strong sense of emotional attachment to them. There is even evidence of a wider 'kitsch' value and almost 'retro-cool' value in the way that they are discussed. They may be basic, but they are still essential and familiar communication tools.

In the course of the desk research we discovered a number of web discussion boards which extolled the virtues of the minicom beyond its functionality. There were

examples of minicom art, paintings and sculptures dedicated to the minicom machine.

Annex 2:The Topic Guide

Ofcom
Deaf and Hard of Hearing Textphone Communications Users
Groups and Depths

Objectives
To understand usage of, attitudes to and perceived benefits of textphone services among users
- In order to identify opportunities for future services
- In order to give guidance on marketing and communication for providers

Specific objectives within this are as follows:-

- Assess the needs of customers when it comes to typetalk services (building on City research)

- Understand usage of, and attitudes, to the current service, and identify gaps in the service in terms of content or communication of provision

- Understand the extent to which customers are familiar with the service, its features; their comprehension of provider's communications

- Investigate the potential for other future methods of enhancing/extending the service (text, SMS, Video, web-based communications)

Signers to be present for deaf group – Hearing Loop for hard of hearing

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Introduction
Task 1: Group dynamics to warm up participants and get them used to talking with us 15min.

Tell us something about yourself – going round the room

Name
Where do you live?
How long have you lived in the area?
What work do you do, if any? (part time/full time)
Family set-up
Number/age of children
What would you buy if we gave you £500 and you had to spend it today

Task 2: Experience of textphone services

NB – throughout the discussion, the moderator should play back participants' own language when referring to textphone/Typetalk/TextDirect etc, until we come to the point where we specifically ask them about the name..

The moderator will ask open-ended, laddering questions – we have sought to make the discussion guide as simple and straightforward as possible for clarity. We would aim to use the flip chart and the aid of Signers if present to get as much richness from participants as possible. Participants maybe will want to add notes to the flip chart themselves.

COMMUNICATION   *15m*

- What ways do you use to communicate nowadays? Tell me all the different modes and methods, both face to face and **long distance**. *Moderator to collect on flip chart Prompt on textphone, mobile phone, landline, text message, internet and email, if these do not come up. We are focusing in on long-distance modes of communicating*

- Looking at these, what are the good points and the bad points of each? *Moderator to select a few and gather points of view, including textphone – note down on flip chart*

- What are the most interesting ways, and the easiest ways to communicate long-distance? What is it about these ways that you like?

- What has changed in your long-distance communication habits in the last 5 years? What do you think might change in the next few years?

USING TEXTPHONE SERVICES   *20m*

- How much do you all use these textphone services?

- Give me an example of when you have used textphone services. How did it go? What did you like/dislike about it? *Probe on new vs frequent users of service*

- What is textphoning really good for? What is it not good for? *Compare directly with SMS and Internet for younger/most literate*

- Tell me what typically happens in a textphone call. Take me through from the moment you decide to make the call.

  Probing on every point during the call– the reason for calling, the use of handset and display, the operator's first contact, how you decide what to say, the response of the person you are calling, the operator's skilfulness and helpfulness, how long the call lasts, any difficult or funny moments, ending the call, the impressions you are left with of textphone services

- Now we would like to do a **drawing exercise** – please fill in this drawing with a thought bubble and a speech bubble. This represents the text relay operator – what is she thinking and saying to you? Try to give me a sense of her attitude to you and her attitude to her job. *Hand out drawings – can also reiterate instructions on the flip chart if necessary*

THE SERVICE PROVIDERS
AND THEIR MARKETING/COMMUNICATION   *10min*

- Who provides the textphone service?

- What is its name?

- How do you usually pay for it? What services or schemes are available for you? *Prompt to gauge knowledge of 'extras' like Braille, 24-hour service, pizza delivery etc*

- Where did you first find out about the textphone service? Where else have you heard about it? *Collect on flip chart, probe on advertising vs word of mouth*

- How about other methods of long-distance communication for the deaf and hard of hearing – how have you heard about them? *Probe on SMS-only tarriffs, mobile providers' textphone services*

- If you could draw up a list of improvements to this service, what would be on the list *can do this individually on paper, or verbally, whatever is easiest for participants*

Task 3: Response to new concepts

In this section we have some ideas for new services.   *30m*

Moderator to show, one at a time,A3 boards with text and pictures.
For each:

- What do you think of this? *Spontaneous thoughts and response*

- How could you imagine using this – for what kinds of calls? *to who, why, tone of voice etc*

- What would be the main things about it you would like

- What could go wrong so that this was not useful *probing on complexity, how difficult it would be to use, old-fashioned vs new and different, how likely the service providers would be to make it work*

- What kind of person would really like this idea and use it all the time; and what kind of person would not really get on with this. *watching out for mention of stakeholder groups who like the video relay, though ordinary consumers like it less*

- How would you imagine you would pay for this

   – How easy would it be to get used to *especially web relay with potentially difficult charging system*

And to summarise all 3 ideas
   – Which do you like best
   – Which fits best with you and your life

   – Which do you think will take off, why

   – What would be your final advice to the providers of communications systems - What could they do to make your life better and easier

THANK PARTICIPANTS FOR TIME AND HAND OUT INCENTIVES

Glossary of terms

Bluetooth: is a wireless system that allows mobile phones, computers and other devices to communicate with each other over short distances

BSL: British Sign Language

BT Text Direct: is a service that allows you to call a hearing person using a text phone directly

Chatter text CD Rom: software that enables personal computers to connect with a minicom.

Minicom: is a widely used brand of textphone

MSN Messenger: is a free internet chat room provided by Microsoft that enables real time conversations online.

Nokia 9210 communicator: is a mobile phone and a PDA (Personal Digital Assistant) that combines mobile phone and the Internet; it allows communication by email, SMS, and fax; office applications, pictures, and multimedia;

Text phone: is a telephone with a keyboard and a display screen. Instead of speaking into a telephone mouthpiece you type what you want to say using the keyboard.

T-switch: A hearing aid has a 'T' position that when switched on can pick up sound from listening devices like a loop system or telephone receiver.

Typetalk: relays conversations via an operator between people who use textphones and people who use voice telephones. Once callers are connected, they can choose to type or speak to each other.