People with visual impairments and communications services

Research Document

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# People with visual impairments and communications services

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People with visual impairments and communications services
Section 1

Executive Summary

1.1 Key insights – people with visual impairments

A variety of factors influence experiences and attitudes to communication services

- Independence varied considerably from total dependence on others to living mostly independent lives; however all required assistance in accessing services at some stage

- Age had an impact on people’s attitudes to their impairments, with older respondents more likely to believe they had to adjust to access services while younger respondents were more likely to believe difficult access was due to a problem with the service

- There were many differences in terms of level, onset and variability of impairment which meant that the ability to tailor services and devices to suit the individual’s needs was very important

- People were very reliant on their memory (particularly if they had a severe or profound impairment); changes to the order of TV channels, for example, was a cause of irritation

- Being a part of a community (i.e. schools, social groups, workplaces, council networks) that helped or assisted those with impairments meant that members were more aware of services available to them. People who were not members of such communities typically had much more limited access to such information

1.2 Communications services – common themes across markets

Low expectations of service providers – desire for experience equivalent to others

- Expectations of service providers were low - it was expected that service providers could do little to assist them and many were unsure where to go for information. Therefore, respondents typically did not tell suppliers about their impairment; they were also embarrassed or did not want to divulge this level of personal information

- Specialist services and devices were perceived to be too expensive and excluded some from accessing required services; this was compounded by relatively low incomes

- Experiences that were equivalent to those experienced by all other consumers were desired in order to avoid drawing unwanted attention to their impairment; discrete services and devices were desired

Word of mouth was a key source of information

- Word of mouth was a key source of information particularly for those who had limited interactions with other visually impaired people. There was uncertainty about the
existence of communication chains; some were unsure whether they should wait for people to approach them for assistance or if they needed to seek out the information

- Some found it hard to come to terms with their impairment (particularly if acquired) and were consequently reluctant to actively seek information as this was to acknowledge their impairment

Respondents were not always empowered to resolve their own queries

- Family members or friends may communicate with the suppliers on their behalf. However, sometimes these ‘representatives’ did not fully understand what was required and an inferior solution was reached

- Members of staff in call centres were unable to assist many of the people with visual impairments, insisting that they look at menus and devices, despite being told the caller could not see. They tended not to offer alternatives such as the assistance of a technician and many did not understand that the call might take longer than average.

1.3 Television

Digital TV offered a good range of content but channel repertoire tended to be limited for those who could not see the on-screen guide

- Consumers with visual impairments rely heavily on memorising channel numbers for TV viewing. Therefore, re-ordering of channels meant that channels had to be re-learnt.

On-screen information was difficult to access for many - creating a barrier to use of interactive television for these consumers

- Small text and poor use of colour meant onscreen information was largely inaccessible to consumers with visual impairments. Moving information which was too fast or phone numbers which were read out too quickly or only displayed on-screen were also inaccessible. Many were unable to watch programmes with foreign content due to inability to use the subtitles.

Audio description was helpful – and socially beneficial – to those with severe or profound impairments

- Audio description has enabled many people with severe or profound visual impairments to get the full story without relying on other members of the household. This has been particularly good for new programmes to help imagine characters and situations and to understand ‘silent endings’ of films or dramas.

- It also appears to have been socially beneficial as respondents said they were able to engage in conversations about television from which they had previously been excluded.

- Audio description was less appealing to those with mild or moderate impairments who preferred to miss some details as extra detail was annoying; however it was regarded as beneficial for those with worse eyesight or for themselves if their eyesight were to deteriorate.
There were some requests to improve the audio description service. Respondents wanted it to be available for more programmes, the narration to be improved by considering the level of detail provided and improving the fit of the narrator’s accent with the actors’ accents.

Customer service posed barriers for many in relation to setting up services and resolving problems with equipment

Some suppliers sent a technician to install the service and showed respondents how to use the services. However, others relied on on-screen menus and instruction booklets and family members were therefore likely to be called on for assistance.

It appeared that call centre staff were not able to offer solutions to callers who could not see. Members of staff were insistent that callers look at menus and equipment despite being told by the caller that they had a visual impairment. Many were unwilling to spend extra time on the call to enable the caller to resolve the problem for themselves. Assistance of technicians was not always offered or resulted in delays. Consequently some people had to rely on friends and family and in some cases cancelled their service.

1.4 Radio

Overall, the radio services worked well and the experience was equivalent to that experienced by other people

Changing channels was easy but if errors were made this was less frustrating than it was with TV channels. Frequent announcements of the channel name were really helpful and this was contrasted to television where this did not work as well.

Radio through digital TV was especially easy to navigate. While channel name announcements on digital radio were appreciated, some newer stations were not announced and this inconsistency was annoying.

1.5 Fixed line telephone

Similar to radio, fixed line telephone mostly worked well and service was satisfactory

Consistent with UK trends, use of fixed lines appears to be declining amongst people with visual impairments. Many now use their mobile phones for calls and text messages and online communications as opposed to their landline.

Large button phones were appreciated by those with mild or moderate impairments and handsets with poor colour contrast, cramped buttons and the absence of a raised dot on the 5 button were difficult to use.

1.6 Mobile telephone

Current mobile experience amongst people with visual impairments is not equivalent to other consumers - assistance was often required from friends and family

Mobile customers with visual impairments didn’t tend to use all the functions available due to inaccessibility. For example, address book usage was limited due to
the need to remember the order of entries or dial the number each time and assistance was often required in using text message services.

- Many used pay as you go phones but noted problems with the top up process – long numbers written in small print which they were required to enter into the phone.

Handset capabilities potentially play a greater role in network choice amongst people with visual impairments

- Most knew of several alternative networks and various competitor offers and felt confident to change suppliers. However, one barrier to switching, handset and/or network, was incomplete knowledge and low awareness of specialist software amongst staff. In addition, the relatively high cost of software required by some people to access mobile telephones was also acting as a barrier to ownership.

- For those who used talking software their choice of handsets and, therefore, network was limited as not all handsets were compatible. Some handsets could be adjusted to suit colour and text preferences which would assist visually impaired consumers; others did not enable the owner to tailor colour and text, which further limited their choice in the mobile market.

Mobile phone suppliers were not always able to assist people with visual impairments

- Similar to television suppliers, some members of staff in call centres were unable to assist those who called with a problem, but said they could not clearly see their handset.

- Staff in retail outlets tended to have poor awareness of speech software which restricted choice for these consumers.

1.7 Computer and internet

Software trial periods may assist many people with visual impairments either get online or make greater use of the internet

- The software required by some people with visual impairments in order to use the computer/internet was considered useful and of a high quality, but too expensive.

- Speech recognition software was appealing in principle, but the software itself did not live up to expectations. Opportunities for trialling software options were limited but thought to be beneficial in order to find the most suitable solution according to personal requirements.

Some websites were almost inaccessible due to their design while others allowed users to tailor aspects which enhanced the experience for people with visual impairments

- Homepages which followed the standard layout with menus at the top and down the right hand side were easy to navigate. However, too much or hard to read text/font on the homepage, and lack of a sophisticated search function acted as barriers to use.
• Consumers with visual impairments would benefit from the ability to tailor the presentation of websites. For example, some sites had colour schemes that were difficult to read and images that lacked clarity.

**Most were aware of alternative suppliers and felt confident to switch supplier**

• Most respondents were aware of numerous alternative internet service providers and also of the various software options to assist users with visual impairments. Most felt confident to change supplier.
Section 2

Objectives and methodology

2.1 Introduction

Under the Communications Act of 2003, Ofcom (the Office of Communications) must have regard in performing its duties to the needs of persons with disabilities, of the elderly and of those on low incomes.

Previous research has attempted to cover individuals with a range of disabilities. However it has been found that this resulted in non-specific findings and did not maximise insight. This issue was raised following the publication of the Consumer Experience Report in November 2006.

Ofcom have begun to address this issue and recently published the 2007 Consumer Experience Report which included research amongst people with hearing impairments.

In 2008 Ofcom commissioned GfK NOP Media and GfK NOP Social Research to conduct qualitative research amongst people aged 8 years and above who have a visual impairment. This report details the findings of the research.

2.2 Objectives

The main objectives of the study were to:

- Understand how respondents with a visual impairment use communication services in their daily lives
- Investigate awareness and use of various communication services and benefits, as well as those services specific to the visually impaired
- Explore awareness and access to new digital services
- Identify problems, if any, respondents are experiencing with accessing and using communication services (fixed line, mobile, internet, multi-channel television and radio)
- Explore ideas for overcoming barriers to access and usage
- Identify what information sources they use when switching or finding out about services and costs
- Identify what mainstream and specialist equipment they use or have adapted to their needs
- Understand why certain customers may not be using specialist equipment
- Investigate awareness and understanding of specialist aids such as audio description for TV and speech recognition software for computers, amongst others
- Investigate whether higher take-up of technology amongst young people in general is reflected in younger people who have a visual impairment
2.3 Methodology

A qualitative approach was deemed the most appropriate methodology for this study. Forty 2 hour depth interviews were conducted at the respondents' homes. Conducting the interviews in home enabled the respondents to demonstrate their usage of the communication services and the moderator was able to understand and explore the issues that arose. Parents of younger respondents were interviewed at the end of the interview to compare usage of communication services relative to friends and siblings and to understand what impact their child's impairment had on decisions made about communication services within the household.

Interviews were conducted between the 25th of February and the 5th of April 2008.

Interviews with respondents aged 17 years and under were conducted in the presence of a parent or guardian; older respondents were welcome to have a friend with them throughout the interview.

Half of the respondents completed a pre-task exercise in the form of a diary prior to the interview to understand:

- Communication services used either in the home or at other locations
- Usage of specialist services for people with Visual Impairments
- Aspects that worked well and not so well with the services used and changes that would ideally be made

The diary was a three-day exercise. Respondents who were unable to read the printed version of the pre-task were given the option to receive a recording, email or receive a daily phone call to complete the task. The pre-task was used to encourage respondents to think through their experiences prior to the interview. The pre-task template is shown in Appendix 1.

The following topics were covered during the interview:

- Respondent context (presence of others in household, membership of organisations that support people with visual impairments)
- Detailed review of communication services used:
  a) Use of service
  b) Positives, negatives and desired changes
  c) Ability to access all aspects of the service
  d) Barriers to use
  e) Use and perceptions of audio description service on television
- Awareness and perceptions of communication services and devices available for people with visual impairments
- Experiences with suppliers of communication services
• Potential adjustments or solutions to improve access to communication services

2.4 Recruitment

Respondents were recruited to participate by specialist recruiters. Recruiters used a combination of face to face recruitment and snowballing (asking for referrals) to reach the required audience.

2.5 Sample structure

Quotas were applied across the sample to ensure robust sample sizes by:

• Level of impairment (mild, moderate, severe and profound)
• Onset of impairment (congenital or acquired)
• Age range
• Gender
• Technology embracers and technology rejecters
• Social grade
• Switchers of communications service providers

Sample was representative of:

• All nations (England, Scotland, Wales and Northern Ireland)
• Urban, rural and suburban locations
• Ethnic backgrounds
• Working status

Respondents were excluded from the sample if they were 7 years or under and if they did not access services due to cost. A table of respondent characteristics is shown in Appendix 2.
Section 3

Main Findings

Context

This section outlines some contextual findings which are important to understand experiences and attitudes towards communication services.

3.1 Key insights – people with visual impairments

a) Independence

Extremes were evident in levels of independence amongst the respondents. This ranged from only calling on family and friends when a document needed to be read through to dependence on family members to change TV channels or dial phone numbers.

Irrespective of the level of dependence on family and friends, all required support from family, friends, neighbours or professionals in accessing the services at some stage.

Illustrative anecdotes

Independence (Male, 57, Profound, Acquired)
Living an independent life and not relying on others unless absolutely necessary was very important to this respondent; his independence was a source of pride. He extensively used talking books, audio description and digital recorders to enable him to do as much for himself as possible without asking others for assistance. He contrasted himself with his sister (also blind) who he felt was too dependent on her husband and other people.

“I have a sister that's blind… but she hasn't got what we've got, I mean we've got independence. She just depends on her husband and you can't do this. You can't depend on Joe Public, Joe Public is not always there.”

Dependence (Female, 80, Severe, Acquired)
This respondent was very dependent on her husband in using communication services and for other aspects of her life such as shopping and seeing family. In navigating the house she would walk behind her husband holding his belt and if she wanted to go to another part of the house she would call out to him for assistance. When asked how she performed tasks such as changing TV channels or phoning family, the answer was invariably that her husband did it for her. If her husband was out of the house, she would not watch the television, but would wait for him.

“But my husband has to put it (the television) on and get the things right. He has to turn it on... he always does the volume.”

b) Age divide

The age of the individual had an impact on his or her attitude to their impairment which in turn impacted expectations of access to communication services. Older respondents were
more likely to internalise their impairment and believe the impairment was ‘their problem’ and that they had to adjust as best they can in accessing the services. Younger respondents, by contrast, had higher expectations of communication services and were more likely to believe that any limitations in terms of access were due to a problem with the service itself.

c) Discretion

Wherever possible, people with visual impairments desired an equivalent experience to other people in accessing communication services. This primarily impacted their usage and opinion of the devices used to access services, but also impacted how they used services outside of the home (i.e. mobile phones). Many were embarrassed about their impairment and were therefore reluctant to tell friends and acquaintances about it, fearful that they would be seen differently. Others were concerned that they could be a target of crime when out of the home.

Illustrative anecdote

Embarrassment (Female, 45, Severe, Acquired)
Concealing her impairment was very important to this respondent. Close friends and family had been told about her impairment, some had been informed only recently despite having known her for a long time. She worked in their family café and recognised her customers primarily by their voice.

She wore coloured glasses for the benefit of her impairment, but needed to take them off to use her mobile phone and was very self-conscious about this in public. She therefore told people that she would not respond to text messages when out, but would take calls instead as she did not need to take off her glasses to do this.

“\textit{I try and get on and be as normal as possible because, again, I just get embarrassed about it, even after all these years and my age I still feel embarrassed so I try to cover things up and not let people know.}”

d) Impairments

Some people had multiple impairments and their visual impairment was a by-product of their ‘primary impairment’ (e.g. diabetes and multiple sclerosis). This ‘primary impairment’ also impacted their access to services if, for example, they had difficulties with their fine motor skills. Furthermore, sources of information and support may have been provided with consideration to their primary impairment as opposed to their visual impairment.

The level of impairment also had an obvious impact on access to services for respondents. Someone with a mild impairment had very different needs and preferences compared to someone with a severe impairment. More information about the impact of the level of impairment on access to communication services will be detailed throughout this report.

The onset of the impairment also had an impact on access to communication services. Those with congenital impairments were typically better informed about services and support available compared to those with acquired impairments. People with congenital onset had received support throughout their schooling and were consequently more aware of what was available.
Amongst those with some sight, a few people reported that their eyesight was variable; one day their eyesight would be at a certain level, the next day it could be better or worse. Furthermore, other respondents’ eyesight was gradually deteriorating with time. These respondents had to consider the changing nature of their impairment when choosing services.

e) Memory

Many people relied on their memory when using communication services, particularly if they had a severe or profound impairment. Memory was used in several ways:

- Memorise the order (e.g. memorise the order of their contacts in the mobile phone address book)
- Memorise the numbers (e.g. memorise the number for a TV channel)
- Memorise layouts (e.g. layout of remote control)

Reliance on memory in order to use communication services meant that respondents were reluctant to change some of the devices they used and were inconvenienced when the order of TV channels was changed.

Illustrative anecdote

Role of memory (Male, 42, Moderate, Acquired)
This respondent was very reliant on his memory when using communication services. He lived alone and his house was meticulously laid out so that he could quickly locate what he was looking for. When his children visited, they would be told to leave things as they were found. He relied on his memory for changing TV channels and was inconvenienced whenever his supplier changed the order of their channels. He had also memorised phone numbers, but kept a recording of phone numbers as a back-up system.

“I memorise exactly where they [his CDs] all are, because obviously I can’t read any of them. So I memorise where they are so I know roughly. So if anyone takes mine, they’ve got to put it back where it was, otherwise it bothers me. But a lot of it is done on memory, as I say, because if you do something enough times, I’ll memorise it. And with [ ] that annoys me because they move channels around.”

f) Cost

Specialist services for people with visual impairments were perceived to be expensive relative to other mass market services. This was a consistent experience and was not just confined to communication services. Many believed that the prices charged were discriminatory and strongly believed that this needs to be addressed, as cost is presently a barrier.

The cost barriers were upsetting for those who felt that they have no choice but to pay the stated price; they felt they could not access communication services without the service or device. Suppliers and manufacturers or devices were perceived to be taking advantage of their impairment.
People with visual impairments and communications services

The cost problems were compounded by the relatively low incomes of many respondents who were either not able to work, working part time or working in low paid jobs due to their impairment.

Illustrative anecdote

Cost (Female, 46, Moderate, Acquired)
This respondent’s visual impairment was due to her multiple sclerosis. She was involved in a group that supported people with multiple sclerosis (working on a voluntary basis), but not with visual impairments specifically. She was upset about the prices charged for devices and services for people with visual impairments (and other disabilities) and felt that it was unfair and hard to associate a cost with something that she could not get by without.

“Probably a lot more than an ordinary one (for a large button remote control) because people usually are penalised for their disability, so probably, I'm not sure what you pay for a remote control but I would imagine you would pay a lot more than an ordinary one… you can't really put a price on something that's going to help you but sometimes you have to.”

g) Expectations

Awareness of services designed to assist people with visual impairments was often low. Consequently, expectations of services were low and many believed that little could be done to improve access to the services. When probed on where to go for further information about services available to them, many were unsure where such information could be found.

Illustrative anecdote

Low expectations of voice recognition software (Male, 54, Profound, Acquired)
A respondent who was an accountant did not use his computer, he worked with his sister and she performed any tasks that required use of a computer. Friends of his used the computer for socialising and meeting people, he felt excluded from this but was not proactively looking for a solution so that he could participate. He had heard of voice recognition software for computers, but had low expectations of it and consequently did not look into it.

“I mean, first of all, you know, your computer might not recognise the word and then you've got to edit it, it's got loads and loads of mistakes in it and I can just imagine in the end you would just throw it on the floor.”

h) Community

Some respondents were members of communities that support people with visual impairments. Communities included schools, social groups, workplaces and local council support networks.

Being a part of a network meant that respondents were more aware of services available to them through word of mouth or guest speakers organised by the group and other visits. Those who were not a part of a group were less informed and had lower awareness of what was available to them.
People with visual impairments and communications services

Schools, universities and workplaces provided opportunities to try out services that they then potentially bought for their home. Students were made aware of financial aid to purchase required services and devices.

Illustrative anecdote

Student Assistance (Male, 18, Mild, Congenital)
A university student had been able to trial computer software via his support worker at university. This had been beneficial to him as he had been able to discover what suited his impairment through trying a few different options (he discovered that Zoom Text was more suited to his needs than SuperNova). He was knowledgeable about a lot of services available to him and had gained a lot of this information via his university contacts.

“That [Zoom Text] was from my University friend, my disability advisor, so she probably dug that one out for me. And I tried it on one of their computers down there and I liked it, so they said they would arrange to have that installed on my own at home, so I could use it at my home”.

3.2 Information Barriers

It was evident that there were a number of information barriers for people with visual impairments in accessing communication services.

a) Not engaged

Respondents who could be described as ‘not engaged’ (that is, not members of any community for people with visual impairments) were generally unsure where to go for information and did not hear about services through word of mouth. Word of mouth was a very important source of information and without access to this information source it was difficult to find out about available services.

b) Communication chain

Respondents believed that a communication chain exists (or should exist) where hospitals, government departments and other organisations that serve the needs of people with visual impairments would communicate with each other and ensure that people with visual impairments were informed of services available to them. There was a sense of confusion surrounding whether the individual should follow up information directly with the organisations or should wait to be contacted.

It was suggested by some that a central register should be set up where people can register which impairment they have and receive information in two ways:

- Individuals could contact the central body to find out about services that would assist them
- Enable organisations that offer a service for people with visual impairments to contact people and inform them of services available
Illustrative anecdote

Poor information sources (Parent of Female, 8, Moderate, Congenital)
The mother of one respondent had experienced difficulties in finding out information about what communication services were available for her child. She felt that there was no clear direction for where to go for information and that salespeople were unaware of which services and devices would be suitable for her child’s needs.

“I find that with everything really, nobody actually says, ‘here is a product and it’s great if you need it for x, y, z.’ I think if we can register somewhere and information can be given to us, which is a lot easier from my point of view. Because if we have to go into a shop to buy a computer and say ‘My daughter can’t see very well, what can we do?’ He’ll say ‘Oh, yes, you can have a bigger screen.’ But there’s no technical development behind that.”

c) Nonacceptance

People with acquired impairments often described a need to come to terms with their impairment or a desire for things to continue as before with no changes required. Consequently, people were reluctant to contact organisations that provide assistance or suppliers directly, as this was a way of admitting their impairment. They preferred to persevere with potentially unsuitable services than have something adapted.

Embarrassment about their impairment also led to nonacceptance and reluctance to seek out further information and assistance, particularly for children.

d) Trust

There was some cynicism about existing sources of information and support. The RNIB, for example, was described as an organisation that is knowledgeable about visual impairments and associated services, however as they also sell devices some are wary of contacting the RNIB.

The internet was perceived to be a good source of information; however there was some concern about purchasing goods and services over the internet or uploading personal information for security reasons.

e) Assistance

As mentioned previously, all people with visual impairments relied on family and friends at some point in accessing communication services. Sometimes family members or friends would be called on to speak to communication suppliers on their behalf. If the family member or friend did not fully understand the needs of the person they were representing, they could be given the wrong information or receive an inferior solution. Suppliers may not be aware that they are speaking to a representative rather than the actual customer.
3.3 Suppliers overview

a) Respondent behaviours and attitudes to suppliers

As mentioned earlier, there was a reluctance to tell suppliers about visual impairments. Suppliers were not informed because:

- They were unsure what benefit they would receive
- They were embarrassed about their impairment
- They did not want to provide this personal information to a ‘stranger over the phone’

Suppliers were generally not chosen for their ability to meet their needs as a visually impaired person, rather they were chosen because:

- They offered a good deal or price
- They were available to them (e.g. may have chosen a satellite TV provider because there were no cable suppliers in their area).

People did not actively seek information from their suppliers as they:

- Did not expect to benefit from informing suppliers – supplier could or would not do anything to assist
- Were not aware of what support was available

Some respondents relied on friends and family to interact with suppliers on their behalf, particularly if they had a severe or profound impairment or had acquired their impairment late in life. Friends and family were relied on because they could more easily resolve issues that required good eyesight (looking at cables at the back of a satellite box, for example).

b) Experiences with suppliers

There were many opportunities for suppliers to improve the service they deliver to people with visual impairments. Staff in call centres experienced some difficulties in meeting the needs of people with visual impairments. Those respondents who had tried to resolve issues themselves (rather than asking family and friends for assistance) had found that staff were poorly trained in catering to the needs of someone with a visual impairment:

- The staff were not sure how to provide assistance to people who said they could not see (e.g. insisted that respondents look at the back of a cable box, even though they could not)
- Were not able to offer a suitable alternative (unable to quickly get a technician to visit the home to resolve the issue)
- Did not understand that it would take longer to resolve the issue than it would for other calls

Consequently, family and friends were relied on to expedite the resolution of any problems or the respondent visited the supplier in person (rather than using the telephone) so that issues could be resolved more quickly.
c) Good supplier interactions

Some suppliers offered good service to people with visual impairments. Suppliers who had given good service:

- Offered alternative support such as suggesting they send a technician to resolve an issue
- Call centre staff had been patient and helpful in resolving the issue over the phone
- Had informed every customer of the services they provide for people with visual impairments (e.g. Braille bills)
Illustrative anecdote

Differences in service delivery (Female, 33, Severe, Acquired)
One respondent experienced extremes in customer service from different providers.

Her television provider was [     ] and at one stage she experienced some problems with the service and called for assistance. She got the impression that the call centre staff member was not adequately trained to assist someone who had a visual impairment (this was a rare case in that she had told [     ] that she may need assistance due to her impairment when she signed up). She requested the services of a technician, but was told that a technician would not be available for two weeks and that there would be no discount for the intervening period (despite being unable to use the service). The situation was resolved when she asked her neighbour to come in and deal with [     ] on her behalf.

“When we bought the package the both of us said we can’t see we might need some extra help. He was like ‘Yes, that will be no problem, there is an engineer in the area.’ That’s what we were told. But they were saying ‘Remove the card…’ But when you explain that you can’t do it, it’s as if it goes over their head they’re not actually listening to that.”

Her mobile phone provider was [     ]. She called for assistance as she appeared to be receiving someone else’s text messages. When she told the staff member that she could not see the phone clearly she found that the staff member became agitated about the amount of time it was taking, and she eventually decided to call into a store to have the problem rectified. The store resolved the issue, but she felt it could have been resolved over the phone had they been more accommodating.

“What seems to happen is they quick fire the problem in the head so they think that they know the answer, and then they are not listening to you say ‘No, hang on a minute, I do not know where that button is and I can’t…’ So they become more frustrated and I think it goes around in a circle. I became more frustrated because I can’t do what they are asking me to do and they are definitely not listening to what I have actually told them, then they think I do not know what I am talking about.”

These experiences were contrasted with a disability charity called Leonard Cheshire that she dealt with. They provided assistance with computer queries and she praised them for their patience and desire to help her solve the problem over the phone.

“They kept repeating themselves in a tone of voice that wasn’t getting annoyed or frustrated… I was having to read it through a magnifying glass on the screen; it took about an hour and a half to do, but like I said very patient, kept taking me back to the beginning, if something wasn’t working, it wasn’t like frustrating them because they’re quite used to it I think. And just the fact that they said to me in the end ‘Do you want to leave it for a half an hour and I will give you a call back if you want to rest your eyes or if it is getting on your nerves.’”
3.4 Devices overview

a) Ideal device characteristics

There was wide variability in the usefulness of devices used for accessing services; good examples included:

- Devices that looked as similar as possible to other people's. This was particularly true for those used outside the home (mobile phones) and for children who wanted the same design as their friends

- Talking menus were attractive to people with severe or profound impairments, as they were unable to read displays, and for those with mild or moderate impairments who needed to get very close to screens

- Enlarged buttons, font and screens were attractive to those with mild or moderate impairments; tactile aspects were beneficial for those with severe or profound impairments (raised dot on 5, indented or raised numbers and letters)

- Minimalist design was desired for allowing room to make other buttons larger and to reduce errors in using remote controls, radios and mobile phones

- Consistent layouts were beneficial to those who relied on their memory. Older mobile phones, for example, were kept to avoid having to learn a new phone

- Easy to operate, particularly when there was a sense of urgency (mobile and fixed line telephones where you flick the cover to answer, for example)

- Affordable cost was essential, particularly for talking mobile phones and computer aids (software was too expensive)

b) Poor device characteristics

Designers of devices should avoid the following:

- Flush, small and cramped buttons which result in errors when using the device

- Several functions on one button as it is too easy to make errors through using the wrong angle

- Small and unclear displays that are hard to see

- Devices that cannot be tailored to suit preferences (i.e. unable to change font size, type or colour contrast)

- Devices that require periodic re-setting (e.g. shuffling of channel order on TV)

- Poor software compatibility that results in limited choice (e.g. talking software that only works with certain brands of mobile phone)
Illustrative anecdote

Easy to use devices (Female, 45, Severe, Acquired)
One respondent had good and poor quality devices in her home. She had two fixed line phones and would try to avoid using one of them as she sometimes hung up the phone instead of answering it. This was because for the poor quality one it was hard to see which button was for accepting a call and which was for rejecting them. The other was easier to use as she only had to flip it back to answer, with no need to press any buttons.

“With the mobile phone, when it rings all I’ve got to do is flip it open I haven’t got to press any buttons to answer it which is a godsend because I wouldn’t be able to see which one it is and I might get in a panic. So with that, it’s ringing, I just flip it open; I answer it; and then to cut the call off I just shut the screen. And it’s the same with the [preferred] house phone as well. If it rings I can just flip it open and when I want to disconnect I just close it up, so I’m not fiddling around to take my glasses off to find out which button’s which and what button I’ve got to press. [The poorly designed home phone] I don’t know what button I’m pressing because none of them are clear, so I’ll just usually try any button and I end up cutting someone off. So, yes, it’s no good to me. It’s got to be something that’s sort of easy to do – and I find that difficult.”

Television

3.5 Television

a) Consumer access

Most accessed digital TV and appreciated the wide range of content available.

With the additional channels on offer, there were some challenges:

- Increased reliance on memory for order or channels or specific channel codes
- Multi-channel service providers periodically re-ordered the channels and this was confusing and inconvenient for those who relied on their memory to find their channels
- The repertoire of channels watched was more limited for those who could not see on-screen information

Illustrative anecdote

Changing the order of TV channels (Male, 50, Severe, Acquired)
A [ ] customer navigated the various channels available to him either through entering the number of the channel on the remote from memory or by choosing channel 10 and scrolling back and forth. He needed someone to tell him the number for a given channel in order to memorise it.

“I know there is a menu there [onscreen] that tells you, right now on this channel, there is this. If that was audio described, then I wouldn’t have to go through all this wading and memorising numbers.”
Onscreen information could often be problematic:

- The information was often presented in small text with poor colour contrast
- Moving information across the bottom of the screen (e.g. on the news) was too fast and could not be read
- Phone numbers were read out too quickly, not repeated or only displayed onscreen and therefore could not be used
- Content that relied on subtitles could not be watched. An option to listen to an English voiceover was a suggested solution

Text information that could be enlarged was helpful to those with mild or moderate impairments. Those with severe or profound impairments wanted this information to be read out.

Illustrative anecdote

On-screen information (Female, 77, Severe, Congenital)
One respondent watched TV in the mornings and was particularly interested in news about the Royal Family and sport. The morning programme that she watched would talk vaguely about what the agenda was for the morning, but then refer people to an on-screen agenda, which she was not able to see. This was annoying for her as she would have to watch other parts of the show that she was not interested in while waiting for the parts she was interested in to come on.

“When they start the programme each morning they tell you roughly what’s going to be on and then they say see the menu on-screen but there is no talk-over. So, people that can’t see haven’t a clue what time different things are on. I have no idea unless I go up to the screen when it [item of interest] is on.”

Periodic announcements of the channel’s programme schedule were useful in planning TV viewing. However errors were made in finding channels and infrequent announcements of the channel name could result in missing the start of a programme.

Audio description was perceived to be a positive development (even amongst those who did not use it or thought that it should be improved). Further audio announcements of channel names and on-screen text information was desired.

Less than half were aware of audio description; those aware of the service heard of it through advertising, friends and family, membership of communities or by accident. Overall the service had stronger appeal with those who had a severe or profound impairment relative to those who had mild or moderate impairments (who reported that they would prefer to watch the screen even though they missed a lot of the detail).

Audio description had improved television viewing for many who have profound or severe impairments:

- Viewers were able to get the full story. Often movies and dramas had a ‘silent end’ which ruined the story if not explained but audio description solved this issue
Those who received Braille schedules could find out which programmes had audio description through the schedule

Less reliance on other viewers to describe the programme, audio description fulfils this role

It was particularly useful for new programmes where the viewer did not have any preconceived ideas about any of the characters and situations

It was helpful in social situations where friends discussed television programmes as respondents had a greater understanding of the story and could participate more fully in the conversation

However there were some opportunities to improve audio description:

While the level of detail provided was perceived to have improved recently, there was still too much detail for some (for example, in the sample DVD of Coronation Street, there was no need to state that the actors had just kissed)

The voiceover was too scripted (particularly for those who had relied on family and friends in the past). It would be preferable if the narrator would provide more spontaneous commentary as opposed to reading from a script

Sometimes the narrator had a disconnect with the actors (e.g. actors with Northern accents and a narrator with a Southern accent was distracting)

Audio description automatically came on in some instances and people were unsure how to turn it off again

It was not provided on enough television programmes

There was concern about potential for the service to annoy other members of the household who can see the TV clearly; the ability to stream the description to certain members of the household [known as receiver mix AD] would be attractive

There was confusion about which programmes have audio description and the rationale for which programmes have it

People were unsure about how audio description can be accessed, what equipment or TV service is required and whether there is a cost for the service

Audio description had limited appeal for those with mild or moderate impairments:

Prefer to watch the programme despite missing some of the details

Extra detail was annoying if they could follow most of the programme

However these respondents thought that audio description was beneficial for people who had poorer eyesight than themselves or for themselves if their eyesight deteriorated in the future
Illustrative anecdote

Audio description – Unappealing (Female, 17, Profound, Congenital)
One respondent had grown up watching TV with her family describing TV programmes to her. While this system had its shortfalls in that her family would miss some elements, she felt that it was superior to the audio description service which she thought was too contrived.

“I don’t really like it [audio description]. I just find it describes far too much detail than you need… that kind of voice, it doesn’t read normally… you know they’ve read it off a script.”

Audio description – Appealing (Male, 57, Profound, Acquired)
For another respondent audio description had revolutionised the way he watched TV. Prior to audio description he missed the end of many movies and programmes and had to ask friends and family to describe what happened at the end of the programme.

“It’s a free service [audio description] for our advantage and you go to bed and think, well I know what he or she did, or I know who did the murder, or whatever you know, and it’s great. It’s another piece in the jigsaw and it helps.”

b) Consumer choices

Generally consumers were aware of all multi-channel television suppliers. Experiences with suppliers were mixed with none standing out as particularly good or particularly poor.

Overall, the process of getting the service set up was positive (particularly for [ ] and [ ] customers):

- The technician fully installed and tested the service before leaving
- The technician showed them how to use the equipment and answered their questions
- Some had received good ‘deals’ through their suppliers (e.g. bundle with telephone and broadband services)

However, do-it-yourself installations such as [ ] were problematic due to the requirement to read on-screen menus and instruction booklets. Consequently, [ ] customers relied on friends and family for installation.

Devices designed for people with visual impairments were evaluated to understand appeal and identify any concerns with such offers.

A large button remote control was appealing for those with mild or moderate impairments:

- Standard remote controls had buttons that were too small and too hard to see
- This remote would be even more attractive if it were to have fewer buttons and have good colour contrasts

It had less appeal with those who had severe or profound impairments:

- Not able to see the remote control, larger buttons did not provide any benefit
• Those who were reliant on their memory were loath to part with their current remote control as they would need to ‘learn’ a new one

• The remote would be more appealing if it were to have raised characters or indentations

A set top box with talking menus had universal appeal:

• Viewers would know immediately if they were on the correct channel as they would not have to wait for the channel announcement (no longer miss the start of programmes)

• Those who had some sight would not need to go right up to the TV each time the channel was changed to establish which channel they were on

• Less errors would be made in changing channel from memory (e.g. will know immediately if entered ‘10’ on the remote instead of ‘100’)

• Periodic changing of channel order would be less of a problem

No concerns were expressed with regard to this device (although appeal of audio description was mixed as per the above) and many requested that it be extended to other communication services.

Illustrative anecdote

Appeal of talking menu system (Female, 59, Moderate, Acquired)
One respondent’s eyesight was variable in that some days she could watch some TV but on other days she could barely see and preferred to listen to the radio. She found it convenient to listen to the radio through the TV and felt that the talking menu would be useful for both TV and radio channels.

“Because you know where you are; it’s telling you everything. If you switch on the television it’s telling you which one [channel] you’re on, especially for the radio as well, because I just have to listen and see is that my programme, with no flicking through.”

c) Consumer empowerment

Switching multi-channel television suppliers was uncommon. Where suppliers were switched it was for reasons unconnected to their impairment (e.g. moving house and cable not available in new area). Some had cancelled services if they could not get problems resolved (as described above).

d) Consumer protection

Problems emerged in dealing with multi-channel service providers when there was equipment failure:

• Phone support systems assumed that the customer could see; if this was not the case the call centre staff were unsure of what to do or were unable to help
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- Staff lacked empathy for experiences of people with visual impairments (for example, they insisted that the caller look at cables even if the caller has reported that they could not see) and were then unable to offer solutions to the problem.

- Callers got the impression that the staff were impatient and unwilling to accommodate their need for extra time to resolve issues (staff are eager to answer the next call).

- If a technician was offered, the customer was told that they would have to ‘wait’ until the technician was available.

- Calling on friends and family could be embarrassing, but was often the only way to resolve the issue.

- Some had cancelled the service out of frustration due to poor service.

**Illustrative anecdote**

Having to cancel (Male, 38, Severe, Acquired)

A Freeview customer had previously been a [ ] customer when living at his mother’s home (he had now moved out with his partner and child). He was the only person in the household with fluent English and therefore needed to deal with suppliers on behalf of the household. When he called they were insistent that he look on screen and at cables and did not understand that he could not look at it. Ultimately he cancelled the service as they would not send out a technician without charging a fee.

“Living at Mum’s we had [ ] and it went wrong. I phoned them up I told them I could not see but they kept telling me ‘press this button on the control’ and ‘press that button’ and it was not really… I told the woman ‘I can’t see’ and she was telling me ‘this should come up on your screen’ and ‘press that button’ and so on. They were not really that helpful.”

**Radio**

3.6 Radio

a) Consumer access

Overall, provision of radio services was satisfactory for most, with no major barriers to access. There was a slightly higher skew towards older people in terms of use.

Radio was accessed through analogue radios, digital radios and through digital TV. Some respondents also owned the black and yellow radios provided by the British Wireless for the Blind Fund.

To change channel using an analogue radio, they knew which channel they were on from memory or ‘feel’ of the dial, or waited until the channel name was announced. Digital or analogue displays were not always used by those with mild or moderate impairments, many were satisfied to wait until the channel announced the channel name to determine if they had selected the correct frequency.
Digital radios that read out the channel name were appreciated by those with severe or profound impairments for accuracy of choosing the channel; however some newer channels were not announced which was annoying.

Radio through the digital TV appeared the easiest to navigate, but was not widely used. This mode of listening to the radio was appreciated for ease of knowing where to find the digital radio stations (at the bottom of the TV channel list). Further, those who memorised the channel numbers found this to be very convenient and more accurate.

On-screen displays for the radios were variable, those with mild or moderate impairments were able to read them if the font was sufficient in size with good backlighting.

Frequent announcements of the radio channel name by the radio channels was appreciated, this was contrasted with TV where the channel name was announced infrequently. These practices were at odds with the respondent’s preferences; it was more important to know precisely what TV channel had been selected for planning of TV viewing compared to radio where it was less common to turn on the radio for specific programmes.

b) Consumer choices

A minority of respondents were aware of a programme on BBC Radio 4 called In Touch. This programme was specifically for people with visual impairments and appeared to perform an information and view sharing function (which was spontaneously requested by many of respondents during the course of their interviews). However awareness of the programme appeared to be very low.

Fixed line telephone

3.7 Fixed line telephone

a) Consumer access

Fixed line telephones were perceived to be relatively straightforward devices to use and most were happy with the service they received.

All had a fixed line telephone, but usage was declining:

- Mobile phones were owned by most (some older respondents had begrudgingly bought one to appease their families) and replaced the landline phone if at home, but calling another mobile phone, for cost reasons
- Text messaging had also replaced some fixed line telephone use amongst those able to access text messaging services
- Internet also contributed to a decline in fixed line telephone use due to use of email

Cordless and large button telephones were beneficial:

- Cordless phones could be carried around the home and answered without having to rush to the telephone base
• Some people with mild or moderate impairments had large button phones and were no longer as reliant on the raised ‘5’ button

Some handsets were poorly designed and harder to use:

• Colour contrast was poor which made it difficult to distinguish buttons and to read what was written on the button

• Buttons were too cramped, thus resulting in more errors when numbers were dialled or when calls were received

• Others did not have a raised dot on the ‘5’ button which was especially limiting for those who had a severe or profound impairment and relied on tactile aspects of the phone

People had assorted systems for storing phone numbers including:

• Memory, particularly for those who had a severe or profound impairment

• Storing numbers in the address book for their mobile phone

• Large writing in personal phone books

• Speed dial systems

• Scrolling through phone call log

• Recording contact information on analogue tapes or digital recorders

If required to look up phone numbers, people were more reliant on other members of the household due to small print in phone books, particularly if they did not use one of the following services:

• The free directory enquiries service (although there was some ambiguity as described below)

• The internet via the supplier’s website or more general search through Google

One supplier was perceived to be good at communicating the assistance they could provide to people with visual impairments:

• Awareness and usage of the free directory enquiries service was fairly high amongst those with severe and profound impairments (though most could not recall how they originally heard about the service)

• Many were also aware that [ ] could provide bills in Braille and while not all could use Braille, it was nonetheless appreciated
b) Consumer choices

Awareness of other fixed line suppliers was high, however there was some ambiguity in terms of costs as described in Section D – consumer protection.

Three specialist devices were explored with consumers to understand awareness, appeal and identify any concerns.

Speaking caller ID generated little interest overall for the following reasons:

- It was perceived to be a bit of a gimmick, people felt that it was easy enough to answer the phone and find out who is calling
- It was expected that this device was primarily designed for those who live alone and it was therefore unnecessary for those who lived with others or were confident and assertive in dealing with any nuisance calls

This service did have niche appeal with people who:

- Had been a victim of nuisance calls or wanted to screen calls generally
- Lived alone and lacked confidence in dealing with people over the telephone

Big button telephones were already owned by some people and were appealing to others if they had a mild or moderate impairment and benefited from larger buttons and font. They also desired better colour contrast than was the case with some telephones. They were less appealing for those with severe or profound impairments, for whom more tactile aspects such as raised or indented buttons were more important.

The audio prompted answer phone was generally not appealing:

- Satisfied with the standard voicemail services available
- Easy to press a button on a standard answering machine to establish if there are messages

However, this was more interesting if there was a sense of urgency in receiving messages.

c) Consumer empowerment

Most people used one supplier for their fixed line service. If they were not with this supplier, this was typically for cost reasons:

- Fixed line telephone was supplied as a part of a bundle with broadband and digital television
- As a part of a service bundle (in conjunction with gas and electricity) which was beneficial for budget control
• There was trial of other telephone suppliers who promised cheaper rates, however the majority had returned to [a supplier] as they did not receive the anticipated cost savings

d) Consumer protection

Some aspects of the telephone service were not transparent and required clarification so that people could make informed choices and benefit from services that had been developed to assist them

There was confusion regarding the BT 195 service for the following reasons:

• It is was not clear who was eligible for access to the service; it was assumed to be for people who were registered blind, but people were unsure

• There were apparent limits in terms of how many calls could be made to the service per month, but this had not been clearly communicated

• People who were potentially eligible for the service were unaware of it and therefore used 118 services for which they had to pay

As mentioned previously, people had trialled alternative service providers but in some cases had gone back to their original supplier when the service did not meet their expectations:

• Costs associated with the offer did not appear to have been clearly communicated

• It appeared that other aspects of the service were not clearly communicated

There was a strong desire from some to avoid nuisance calls, particularly calls from suppliers attempting to encourage supplier switching. There is uncertainly about how to resolve these issues.

Illustrative anecdote

Ambiguity regarding 195 (Male, 54, Profound, Acquired)
One respondent had used the BT 195 service for business purposes (he was an accountant). BT contacted him and told him that he could not use the service any more as he was using it too much. He could not recall whether he was told about a maximum number of calls when he was first given access to the service and felt that the decision was unfair as it was his only way of finding numbers.

“I used to use 195 which is BT’s directory enquiries, it’s free of charge for people who can’t use the telephone directory… at the time we had a business line and I used to use it quite a lot and so they cancelled it… I suppose if I could choose one thing I’d get BT to put me back on 195.”

Nuisance calls (Female, 75, Mild, Acquired)
A [ ] customer received a lot of nuisance calls and her solution was to disconnect the phone unless making calls. Her daughter had tried to get the problem resolved, but was told that there was nothing that could be done, but she felt that her supplier did not make enough effort.

“They [ ] came here, they put a new phone line in, but it does not make a difference [to nuisance calls]. I thought for sure there was something they could do, but they said no.”
Mobile telephone

3.8 Mobile telephone

a) Consumer access

Mobile phones were a key area where improvements could be made for the benefit of people with visual impairments so that their experience is equivalent to that enjoyed by the general population.

Calls made from mobile phones were typically to other mobile phones (rarely for calling fixed line phones) for cost reasons. Most respondents owned a mobile phone; however there was variation in how mobile phones were used. Differences were driven by age and level of impairment.

People benefited socially from having a mobile phone:

- Ability to access what friends access (particularly when people had the speaking software)
- Sense of confidence in case assistance is required when out of the home (primarily for the individual, but also for concerned family members)

Use of the address book was mixed:

- They either dialled numbers from memory or relied on their memory to remember the order in which their contacts were saved
- Reliance on memory for using the mobile phone meant that the number of contacts stored in the mobile phone was less than you may expect for other people who could clearly see the contents of their address book
- Assistance was sometimes sought in using the address book for storing telephone numbers and in some cases asking others to look up contacts on their behalf

Usage of text messages was also mixed:

- As would likely be the case with other consumers, older respondents were relatively less interested in text messaging compared to younger respondents
- Those with mild or moderate impairments were more likely to use text messages than those who had severe or profound impairments (though speech software made text messaging possible for those with severe or profound impairments)
- People were more likely to ask others for assistance when using text messages when out of the home; this was due to embarrassment or difficulties experienced in reading the screen in different light

Some models of mobile phone were adaptable, which was beneficial for:
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- Adjusting the size of the on-screen text so that was easier to read
- Adjusting the colour contrast to suit individual preferences
- Loading speaking software onto the phone, although this was not possible for all models of phone

Pay as you go and contract methods of payment were used. Pay as you go was appreciated for the ability to manage mobile phone budgets, but some aspects could be improved:

- Process of topping up the credit was problematic as the top up codes were too long and the print was too small
- There were concerns that the credit would run out (for those who used the phone infrequently)
- Consequently, family and friends were relied on to top up the phone for many

**Illustrative anecdote**

Problems with top up process (Male, 56, Mild, Acquired)
A respondent who had previously had a pay as you go contract found the process of topping up his credit was frustrating. The numbers were too small and the initial numbers entered through the menu system were stored in the phone while topping up which created errors. He also felt that there were time limits in entering the information which was also frustrating. He felt that mobile phone companies should streamline the top-up process.

“You would get your code and I found myself putting the wrong figures in a lot of times and getting annoyed.”
b) Consumer choices

Awareness of different mobile phone suppliers was high, as was awareness of the different contract and pay as you go options.

Most of the current offers available for people with visual impairments were attractive, though some alterations were requested.

A mobile phone with a large display and buttons was particularly attractive for those who had a mild or moderate impairment:

- A larger screen would make it easier to send text messages
- Modern mobile phones seemed to be getting smaller and smaller with the screen and button size being compromised; a phone like this one would solve that problem
- This design was also perceived to be useful if they had other disabilities that affected their fine motor skills – bigger buttons would mean fewer mistakes
- Such a phone would lessen dependence on memory (better able to use facilities such as the address book)

A mobile phone with talking functions was very appealing with all respondents:

- Less reliant on memory for storage of phone numbers
- Less reliant on other people for reading out text messages or saving contact details into the phone
- Able to access more aspects of the phone than at present (allow more people to access text messages, for example)

However, while this mobile phone was very attractive and many had heard of it, the price of c. £200 for the software was deemed prohibitive, further, it was not compatible with all phones and choice was therefore limited.

A mobile phone with large on-screen text was mostly appealing for people who had a mild or moderate impairment for the following reasons:

- Could more clearly see text messages, contact details and menus
- Would reduce the number of errors made when dialling phone numbers or sending text messages

However, while the above functions were interesting, there were some concerns about the size of the phone relative to others – a fear of being embarrassed from using such a large phone
Illustrative anecdote

Mobile phone should be like other people’s phones (Female, 35, Profound, Acquired)
One respondent who had mobile phone software had felt excluded when out with friends
before she got her software as they would send and receive text messages, but now she
could participate in this too. However, she felt that having a larger phone when other people
have small phones would be unappealing as it would draw unfavourable attention.

“I want it to look as normal as possible. I don’t want to be pulling a brick out of my bag; I want
it to look like others. I mean my friend’s got exactly the same phone as me. So I want to be
as normal as possible.”

c) Consumer empowerment

While people with visual impairments broadly felt that they were able to change suppliers if
dissatisfied with their offer, there were some constraints they were mindful of:

- Staff members for some suppliers were unaware of the talking software available for
  phones; consequently, some people with visual impairments would not be aware of
  this offer
- Not all mobile phones were compatible with the talking software; thus choice was
  limited
- Not all mobile phones could be adapted to suit the individuals impairment (e.g. font
  size and colour contrast could not always be altered) again limiting choice

d) Consumer protection

For some respondents it was apparent that mobile phone suppliers were ill-equipped in
assisting people with visual impairments:

- Staff in call centres assumed that they would be able to see the phone clearly to
  answer questions or try solutions for technical difficulties experienced
- Staff in some mobile phone outlets were unaware of the talking software and
  asserted that no such software was available
- As mentioned above, the top up process could be cumbersome and people had to
  call on the assistance of family and friends, or go to the store itself to top up their
  credit

In terms of the devices themselves, the trend toward smaller mobile phones with small flush
buttons and small screens was a concern, consequently:

- ‘Older’ phones were kept for longer than might otherwise be the case due to
  concerns about usability of more ‘modern’ phones
People with visual impairments and communications services

• ‘Older’ phones were kept for a longer period of time due to concerns about learning the layout of a new phone

Illustrative anecdote

Prefer to keep older phone (Female, 20, Mild, Congenital)
One respondent felt that the effort required in order to ‘learn’ a new phone made the prospect of changing phone unappealing. She would have liked to have a phone that was trendier, but felt that the models that appealed to her would not be as easy to use as her present phone.

“I chose the phone because it was just simple, it was just easier to use than having a complicated new phone, as long as it’s okay for me and I don’t have to worry about what other people say.”

All respondents required assistance from others at some point when using their phone and if they were alone, they may have resorted to asking another member of the public for assistance; such assistance had the potential to put the individual in a vulnerable position (theft of phone, for example).

Computer and internet

3.9 Computer and internet

a) Consumer access

Computers and the internet were another key area where improvements could be made to benefit people with visual impairments. People were aware of software and other applications that assist in accessing computers and the internet, but cost was a prohibitive factor.

Software was mostly perceived to be good quality and people appreciated:

• The ability to tailor the software to suit their individual preferences (font style, font size, and colour contrast)

• The main types of software used appeared to be JAWS, SupaNova and Zoom Text which appealed to different needs and requirements

• In principle, people liked the idea of software with voice recognition, however most perceived the quality to be poor and in need of refinement before it would be useful

• There were limited opportunities to trial the software for those who were not employed or in the education system – consequently some had not had the opportunity to thoroughly investigate the offers before purchasing their software

• The key barrier to software purchase was cost; it was unaffordable for many at c. £800 and again, was something people thought needed to be addressed
People were also aware of a variety of hardware modifications, however overall this was a secondary priority relative to the software for most. Modifications included:

- Bought modifications included specialist keyboards (with colour contrast, larger letters on keypads, and stickers for keypads) larger than average monitors, or no monitor at all (for a respondent who had a profound impairment)

- Self made modifications included sticking Blu-tack onto the ‘home keys’ of the keyboard and creating own Braille keys and sticking those on

- Again, cost was a barrier to purchasing some of the hardware (for example, c. £200 for a keyboard with indented letters)

- Some respondents were nervous about damaging the computer (particularly if they were older) and would call on assistance from others or pay for professionals to install software.

**Illustrative anecdote**

Concerns about damage (Female, 43, Mild, Congenital)
Concerns about damaging the computer and only having access to printed instructions prompted one respondent to ask a professional technician to install new equipment and perform basic maintenance tasks.

“We don’t do it ourselves. So for example when we bought the label printer we asked a freelancer man to come in and clean up our computer and at the same time install the label printer.”

**b) Consumer choices**

Awareness of software and internet providers was high overall, as mentioned above software was considered to be prohibitively expensive and opportunities to trial software were limited for those who were not employed or studying.

Many of the current offers to improve access to computers were attractive. Modifications were requested for some aspects of the services and cost was a barrier in most instances.

Voice recognition was attractive in principle; although personal experience with the software for some suggested that modifications needed to be made as the calibration process was cumbersome and inaccurate. But if this could be addressed, the software was appealing to those who:

- Had severe or profound impairments and did not presently use other software such as JAWS

- Were not confident with their keyboard and computer skills generally

As with most computer software options, cost was a barrier.
Awareness of software magnifiers was high and many had access to them. The ability to tailor the presentation of information was a key consideration. Cost was a barrier for some people.

There was low interest in the external magnifier as it was considered to be inferior to the software magnifier:

- It just magnifies the information on the screen, there is no ability to tailor the colour or style
- Magnification software comes with speech functionality

Awareness of keyboard stickers was high, but interest was low for the following reasons:

- Perceived to be a makeshift modification (stickers would become unstuck, an ‘obvious’ adjustment)
- ‘Feel’ of characters would be preferable through indented or raised characters (a better option for those with severe or profound impairments)
- Various people had them in the past but did not make use of them (particularly for children who were too embarrassed to use them)

Similar to magnifying software, awareness of talking software was high and was owned by some. This software was particularly attractive to those with severe and profound impairments who would otherwise not be able to use the computer. However cost was again a barrier.

**Illustrative anecdote**

Enabling access to the internet (Female, 35, Profound, Acquired)
Obtaining Jaws [speech software] enabled one respondent to access the internet where she had not been able to do so in the past. She felt that websites for large organisations were better than others because they had the funds to pay for them. She believed that websites were improving with time and becoming more consistent in their approach.

“Before I purchased that [Jaws] I wouldn’t use the computer because it’s no use to me because no noise comes out of it, it’s all visual isn’t it? Whereas now I can use it.”

**c) Consumer empowerment**

People with visual impairments were confident in switching internet suppliers. However ability to access computers and the internet was hampered by the cost of the software required by some to access this service.

**d) Consumer protection**

The key barrier to accessing computers and the internet was the cost of the software; many believed that the costs were out of reach. Access may not be possible without the software
People with visual impairments and communications services

for those with profound or severe impairments, the software was a necessity for these individuals.

The design of some internet sites limited access in some circumstances. Following are ‘best practice rules’ for websites that are accessible for people with visual impairments.

Hompages

- Adhere to the standard layout of menus across the top and down the right hand side of the page
- Not too much text per page, as this was very time consuming when using speaking software such as JAWS and was generally harder to read for others
- Easy to use and sophisticated search box to facilitate efficient look-up of required content
- Google Accessible was considered to be a best practice website with clear layout and ease of use; other sites were considered to be poor due to the amount of information presented on the homepage

Text

- Text should be easy to read in terms of font style and size
- Any photos on the page should be accompanied by a text descriptions
- Text should be presented in small and manageable chunks
- A high street clothing supplier was mentioned as an example of a poor website for its use of images with the assumption that the viewer can see photos of clothing and colour palettes; a text description would solve this problem

Style

- Minimal colour should be used
- Where colour and text is combined, contrast needs to be considered to ensure it is easy to read
- Images shown should be as clear as possible (i.e. avoid faint lines and washed out effects)
- Laid out in such a way that allows easy use of magnification software (i.e. logical layout and similar content grouped together)
- A children’s game-playing website was considered to be a poor example due to the amount of colour presented on the page and poor colour contrasts (e.g. black text on a dark purple background)
Tailor

- The ability to tailor the presentation of the information was important generally; many who had mild impairments did not have magnification software, but would enlarge where possible to make information easier to read

- Ideally websites should enable the user to tailor the text and colour used to suit their preferences

- The Metropolitan Police website was cited as an example of a good website for the ability to tailor the presentation of the website (presentation of text)

Compatible

- The website should be compatible with software such as Jaws

- One internet mail service used to be incompatible, but this appeared to have been addressed

Illustrative anecdote

Internet site best practice (Male, 18, Mild, Congenital)
A student used the internet a lot in connection with his studies. He felt that most websites were quite good, but that some had too much text making them harder to use (which he described as old American websites that were HTML only). He felt that the Metropolitan Police website was very good because he was able to alter the settings to suit his preferences. It also contained a lot of information, but the menu system was well laid out to enable location of the required information while avoiding information that was not relevant.

“I think all internet sites should have a set template. I know some websites like the Metropolitan Police does that… You can have it white on blue, or yellow on black or stuff like that, so you can change the colours.”
Annex 1

Study Materials

1.1 Homework Diary

Market Research Homework

My appointment is:

Date:

Time:
Instructions for the homework exercise

Please treat this as a communications diary – answering the questions that we have below at the end of each day.

We would like you to complete it for 3 days, this should include two weekdays (between Monday and Friday) and one weekend day (Saturday or Sunday).

You may get your friend, or a member of your household, to write your answers on your behalf.

You will receive an extra £10 for completing this homework exercise. Make sure that you have your homework with you for your interview as the interviewer will want to go through it with you.
Your home

Thinking about your home and other places where you spend a lot of time (e.g. work, school, friends/family places etc.) what communication services or devices do you have, or do you have access to?

In answering this question, please think of all communication services or devices (e.g. telephones including mobile phones, radio, televisions, computers and the internet, books, newspapers, magazines).

Please list them below:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Are there any communication services or devices that you own which are designed or modified for people with visual impairments? If so, please list them below:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Diary - Day 1

1) What day is it today (e.g. Monday)?

2) What communication devices or services have you used today? Tick all that apply:
   - Television
   - Radio
   - Computer/Internet
   - Mobile phone
   - Landline/home phone
   - Newspapers/magazines (including talking newspapers, books etc.)

3) Where did you use this or these device(s) or service(s)? Tick all that apply:
   - Home
   - School
   - Work
   - Friends place
   - Family members house
   - Internet café
   - Other – write in
4) What, if anything, is good about the services you used today?

Please write the name of the service and what was good about it below:

___________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________

5) What, if anything, is not so good about the services you used today?

Please write the name of the service and what was not good about it below:

___________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________

6) Thinking about what you used today, what would you alter or change about it to make it better or easier for you to use?

Please write the name of the service and what you would change about it below:

___________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________

Above was repeated for days two and three
## Annex 2

### Sample Characteristics

#### 2.1 Demographic breakdown

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mild = 9</th>
<th>Moderate = 13</th>
<th>Severe = 9</th>
<th>Profound = 9</th>
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<tbody>
<tr>
<td>Level of impairment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onset of impairment</td>
<td>Acquired = 24</td>
<td>Congenital = 16</td>
<td></td>
<td></td>
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<tr>
<td>Age</td>
<td>8 - 13 years = 5</td>
<td>14 - 17 years = 4</td>
<td>18 - 45 years = 12</td>
<td>46 - 74 years = 15</td>
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<tr>
<td>Gender</td>
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<td>Females = 20</td>
<td></td>
<td></td>
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<tr>
<td>Nation</td>
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<td>Scotland = 3</td>
<td>Northern Ireland = 3</td>
<td>Wales = 3</td>
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<tr>
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<td>Rural = 7</td>
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<td>White = 36</td>
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<td>Working status</td>
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<td>Not working = 8</td>
<td>Student = 11</td>
<td>Retired = 9</td>
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<td>Membership of organisations</td>
<td>Member = 18</td>
<td>Non-member = 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Grade</td>
<td>ABC1 = 23</td>
<td>C2DE = 17</td>
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<td></td>
</tr>
<tr>
<td>Technology attitude</td>
<td>Embracer = 26</td>
<td>Rejecter = 14</td>
<td></td>
<td></td>
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<tr>
<td>Supplier switch</td>
<td>Yes = 16</td>
<td>No = 24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>