



Attitudes towards mobile broadband

September 2008

Prepared by Illuminas for Ofcom



Prepared in compliance with the international quality standard covering market research, ISO 20252 by:

Illuminas

Lion House, 141-145 Curtain Road

London EC2A 3AR

Tel: +44 (0)20 7909 0929

Website: [www.illuminas-global.com](http://www.illuminas-global.com)



## CONTENTS

1. OBJECTIVES	2
2. METHODOLOGY	3
3. EXECUTIVE SUMMARY	5
4. BACKGROUND TO MOBILE INTERNET USE	9
5. HOW DO PEOPLE THINK ABOUT QUALITY?	18
6. EXISTING PERCEPTIONS OF MOBILE INTERNET	22
7. PREFERENCES FOR FUTURE SERVICE LEVELS	24
8. IMPACT ON PROVIDER AND SERVICE CHOICE	27

## ANNEX 1: TOPIC GUIDE



# 1. OBJECTIVES

1.1 The objective of Illuminas' research project was to assess the importance of service quality, including coverage and speed, for consumers of future mobile internet services, and the impact this might have on their supplier choice and supplier switching behaviour. The research findings were to be considered by Ofcom alongside other sources of information.

1.2 The importance and definition of quality needed to be explored to understand what aspects made up '*quality of service*' for consumers. The different aspects of service quality explored included indoor coverage, geographical coverage, immediate locality (variability within usage location - for example, when on a train), reliability, latency / delay and data rate. The research therefore needed to identify which of these network-related quality variables are most important to current users of mobile broadband now and in the future and if differences in quality might influence service provider choice.

1.3 Different levels of service needed to be tested to understand consumer reaction to different service levels for mobile internet users using a laptop or mobile handset. For example, a very good data service speed that only works at home or some hotspots; lower speed that works mostly outside or close to windows, and can be used anywhere in the UK; lower speed that works in most buildings and outside, but can be used anywhere in the UK. Ofcom wished to explore the overall preference for differing levels of service, the relative value placed upon differing service options, and whether availability of differing services would influence supplier choice, or propensity to switch.



## 2. METHODOLOGY

2.1 The research consisted of eight focus groups. All focus group participants had mobile telephones that they used for voice and text communication, and either already used mobile internet or were interested in using it. Respondents were recruited to be light users of mobile internet, heavy users of mobile internet, business users of mobile internet and non users of mobile internet who have fixed broadband in order to understand different use requirements, expectations and behaviour. The group structure was weighted towards existing users (six of the eight groups) as they were better able to make the necessary distinctions between different levels of quality of mobile data than those who have little or no experience of mobile data usage. First hand experience of using the service also helped them to make a more realistic evaluation of differences in mobile data quality within the context of actual mobile data use. For these existing users a pre-group exercise was set to contextualise use and encourage them to think about their experiences of mobile internet prior to the group. All groups consisted of a mix of age (all were at least 18 years old) and gender.

2.2 The groups discussed current internet use (use of mobile broadband vs. fixed broadband, frequency and reliance), internet providers (awareness and perception of different internet providers), perception of quality (defining quality, importance of quality when choosing internet providers) and future intent. Participants were shown a demonstration of different connection speeds. The Topic Guide and details of the demonstration are shown in Annex 1.

2.3 The light user consumer groups consisted of those using mobile internet once a week to once every 2-3 months and heavy users as those who use mobile internet 2-3 times a week or more. Participants must have had access to the internet through a laptop computer on the move (mobile data card or USB modem) and/or through a mobile phone handset. All had to pay for their bills personally and at least two users per group who had mobile internet should have been using this through a 3G phone. The groups also contained a mixture of network customers (both mobile handset and USB modem) and at least two respondents in each group had been using mobile internet for over three years.

2.4 For the non user groups all respondents must have had access to the internet at home via a fixed and/or wireless connection but never accessed the internet through a mobile



phone, PDA or Blackberry, mobile data card or USB modem. All must have used the internet at least 2-3 times per week and be quite or very interested in the idea of using the internet 'on the move'.

2.5 The business groups consisted of 1 Sole Trader/SoHo groups and 1 SME group. Participants in the sole trader group worked in companies of 1-9 employees and the SME group consisted of respondents who worked in companies of 10-250 employees. For the business groups all must have been decision makers and in control of selecting internet providers and services and come from a spread of sectors. Decision makers and employees in the businesses must have had access to the internet either through a mobile phone and/or a laptop using a USB modem (each group contained at least 4 users of USB Modem and at least 4 users of mobile phone / PDA / Blackberry for internet). The employer must have been paying for these internet services for the employees in full. The groups also contained a mixture of network customers (both mobile handset and USB modem) and at least 3 per group must have personally experienced mobile internet (i.e. either through a USB modem or data card, or through a mobile phone, Blackberry or PDA). Respondents must have used mobile internet for business at least once per month.

2.6 Focus groups lasted one hour and forty five minutes and took place in Ofcom premises to allow demonstrations to take place. Each group comprised seven or more respondents recruited to the screening criteria above.

Date and time	Group specification	Location
Wednesday 20/08/2008	Light users (6:15 - 8pm) Non-users (6:15 - 8pm)	London
Thursday 21/08/2008	Heavy users (6:15 - 8pm) SoHo/ Sole trader (6:15 - 8pm)	London
Tuesday 26/08/2008	Light users (6:15 - 8pm) Non-users (6:15 - 8pm)	London
Thursday 28/08/2008	SMEs (6:15 - 8pm) Heavy users (8pm - 9:45pm)	Cardiff



### 3. EXECUTIVE SUMMARY

#### **The research was focussed on early adopters**

3.1 The majority of the research was conducted amongst consumers who already use mobile internet services because their evaluation of the subject was based on actual experience rather than projection. It is important to keep this in mind when considering these findings, as this group currently represents only a minority of consumers. Two focus groups were carried out with those interested in using mobile internet in the future, and these represent a wider proportion, although still by no means all, of the potential market moving forwards.

#### **Many mobile internet users use the service primarily as a 'back-up'**

3.2 Mobile internet is still a relatively new service for most users, and in general it is used as a 'back-up' for when fixed internet cannot be accessed. Few had actively sought the service, and many told us that they had started using mobile internet almost by accident, with experimentation on phone handsets, free USB dongles offered by providers at point of upgrade, and facilities offered by employers being common routes to initial trial and eventual uptake.

#### **Users are currently satisfied with mobile internet and remain impressed that it exists at all**

3.3 There was general satisfaction with the current quality levels of mobile internet, and this was largely because participants were generally pleased that they could access the internet in this way at all. The service is still far from perfect, but as yet there is not a wide demand for improvement because the capabilities it offers, however fallible, are still impressive to users. Quality tended to be seen in terms of speed alone at a spontaneous level, but was felt to encompass coverage as well on deeper reflection. It was interesting to see that non-users had sometimes attempted to use the mobile internet but been put off by poor speed and / or coverage, suggesting that to drive wider uptake, improving these elements may be necessary, as positive early experiences, in addition to some sense of 'need' seems to be a formula for uptake.

#### **Current consumer use of mobile internet does not need high speed connections**

3.4 The demonstration of two differing levels of speed of mobile internet provided some interesting perspectives. Very few saw any relevant differences for the more 'basic' uses of the internet (searches, news story loading and ringtone downloads), and as these are the only kind of services they would really use the mobile internet for, they felt that



either level would be satisfactory. Greater differences were acknowledged for video streaming and downloading, but as most did not anticipate they would ever be doing this sort of thing through mobile internet, the difference did not affect them greatly.

### **Higher speed mobile internet would impact on duration of use more than choice of provider or willingness to pay more**

3.5 The difference that the higher speed version of the demonstration may make would be to duration of use and potentially, services used. If the speed and reliability of mobile broadband increased, they may start to use a greater range of sites when they are on the move, and/ or continue with their existing use habits for longer periods. They would not be prepared to pay more for this - as speed of mobile internet is simply not an area that people feel has variation worthy of higher payment levels. Also there is expectation that quality levels (in terms of both speed and coverage) will undoubtedly develop in time and are therefore not worth paying extra for now.

### **Expectations of connection speed are currently low for mobile internet**

3.6 As seen in 3.3, the notion of quality of service in terms of the fixed internet is very strongly aligned with connection speed. However, expectations and minimum acceptable levels of fixed internet speed varied greatly between individuals, with many feeling that a page taking a few seconds to load is not an issue. It is only when people are routinely using data rich services (TV streaming or uploading photographs / downloading podcasts etc), that they may feel dissatisfied with the speed of the fixed internet, as prior to any problems occurring, many are not even conscious of speed issues. Mobile internet speed is expected to be relatively low; so people don't tend to react strongly when pages take a long time to load up. The only other quality issue was coverage, but again, as people understand that this is linked to the mobile network, where coverage is known to be imperfect, few make an issue of this as it is in line with their lowered expectations of the service, and they have an understanding of the cause.

### **Low expectations resulted in generalised satisfaction**

3.7 As a result, users were reasonably satisfied with their mobile internet service overall, and showed great tolerance, for example by being prepared to try more than a few times to establish a connection, working around any problems, and accepting slow speeds. They also believed that certain services (TV streaming, VoIP etc.) were not appropriate for a mobile connection currently.

### **There is limited understanding of the causes of slow speeds and disconnections**

3.8 There is a large amount of 'noise' in the market as a whole about measuring speed and the many possible causes for less than ideal service delivery. Participants identified many possible causes of low-speed access, such as the devices used to access the



internet, websites themselves, distance from the mast, and degree of overall traffic at the time of day. The proliferation of information and lack of any clear reason for variations in speed and coverage has led to a degree of inertia amongst consumers, with many no longer inclined to investigate the matter in detail, given the perceived lack of credibility around advertised speeds. Although some USB dongle owners were able to estimate that their connection speed was around 2MB, there was little evidence that this had been researched, as a result of lack of understanding and belief in the description given.

### **Ability to connect, rather than speed is more important for mobile internet users**

3.9 At present, the occasions when mobile internet is valued most is when there is a) no other option, and b) when information is needed urgently - whether that is for picking up a work email or looking up a phone number or directions under pressure. This is particularly valuable to business users.

3.10 In the majority of cases, the ability to connect, rather than the speed of that connection, differentiates between satisfaction and frustration. For the vast majority, a lower speed with a greater range of coverage is preferable to higher speeds with limits to coverage and locations for use.

3.11 Whilst this may appear to counter the comments made about quality and how it translates as speed for most users, it must be kept in mind that speed is not yet expected of mobile internet, and in fact it is extensive coverage across all parts of the country that will make the most difference to them at this early stage in the development of the service. This was much more important than variations between indoor and outdoor coverage, which were barely distinguished by the majority.

### **Switching provider for a 'USB dongle' is less risky than switching mobile phone provider**

3.12 The research suggests that impact on provider choice would be greatest for users of USB dongles. The transition between providers is much simpler and lower risk than to change provider for a mobile phone handset or Blackberry, hence people felt more willing to take the 'risk' of trying a new network (as long as it was no more expensive) if they believed it offered a better service. Consumers who access the internet with mobile phone handsets are most interested in the payment package and the benefits and inclusions this contains (call minutes, texts per months, etc), as well as the handset





itself. Other than being available (for some in a way that is easy to use from an ergonomic perspective), mobile internet is seen as a secondary consideration which has very little or no impact on provider choice. However, until there is a way to define 'improved quality' that is easily demonstrable (and therefore widely known and people can believe in it), transition between providers for *any* device type is highly unlikely. Word of mouth within regions could become persuasive in finding out differences in the standard of mobile internet offered by different providers, but at present there is so much vagueness around means of comparison for this new service, that this is probably some way into the future.

3.13 In summary, consumers seem likely to switch 'USB dongle' provider if they had good reason to believe another provider offered a better mobile broadband service - particularly in relation to coverage. At present they don't have a solid means of understanding whether one provider is better than another in this respect, as they are not even sure what the dimensions for measurement might be. There are many more barriers for switching mobile phone provider, especially as the mobile internet is not a critical part of the provider relationship for most, or something which falls especially below expectations.



## 4. BACKGROUND TO MOBILE INTERNET USE

### 4.1 Mobile phone selection and use in context

Choosing a mobile is a complex decision, but one led by core uses for the phone: calling and text messaging

4.1.1 Mobile phone use was a central feature of daily life for all respondents interviewed, and both voice and text communication was used extensively. As such, these are the central pillars governing decisions around tariff, and subsequently network. The majority of those interviewed were on Pay Monthly arrangements, with the exception of some of the non-users of the mobile internet, but for both inclusive calling and texting was central to choosing a tariff and hence a network.

4.1.2 Coverage would only come into the decision making process in network terms if the individual concerned had experienced poor reception in key locations (home and work primarily) in the past and was therefore sensitised to the inconvenience of this, or if there was known poor coverage of a certain network in a certain area. It was generally held that across the country, network coverage was fairly consistent in percentage terms across providers, so the impact boiled down to the quality of signal in the places they planned to use their phones most.

4.1.3 The other key dimension is handset, and for many this is where mobile internet played a part. The majority of users of the mobile internet through their handsets reported that they would never consider a handset that did not have the capacity to access the mobile internet, with some of the heavier users specifying that this would have to be a handset with the right ergonomic set-up for so doing - i.e. a good sized screen or keys that are not too fiddly for typing. In the case of two comparable offers arising on two different networks with good coverage, availability of a preferred handset may be the deciding factor.

4.1.4 For younger people, choosing on the basis of handset may mean purely the availability of a certain preferred brand of handset rather than one that is especially enabled for smooth use of the mobile internet, but for older respondents and anyone using mobile internet through the phone for work, this was where the impact was seen. Data charges and the availability of any bundles are much lower in the hierarchy of decision making, if present at all at the point of phone / tariff selection.



## 4.2 Internet use in context

### Accessing the internet is an important part of daily life

4.2.1 There was widespread agreement across all groups about the importance of the internet in daily modern life and most reported increased use over recent years. This applied to personal use, professional use and for study.

4.2.2 Heavy users of mobile internet were spending up to 8 hours a day online (including fixed and mobile internet), and using a range of applications, including watching video and films, downloading, using Voice over IP alongside general emailing, surfing, research, and shopping.

4.2.3 Light users of mobile internet also tended to be fairly heavy users of fixed internet - with many reliant on it across several areas of their lives:

*'I rely on the internet. I rely on it for my social life and also just my life overall: I find jobs through it and keep all my admin organised using my online banking and all that sort of stuff'*

Male, Light user

4.2.4 Business users made a clear distinction between professional and personal use, and used their mobile internet almost exclusively for the work purposes they had bought it for (especially the self-employed / SoHo group). Many did not use the internet a great deal outside of work - possibly because they spent such a large proportion of their working day online.

4.2.5 Across all groups (including the two non mobile internet-user groups) the vast majority had Wi-Fi internet at home and for all users but one person encountered in the study, mobile internet was used as an addition to, rather than a replacement for, their home (and possibly work) connection.

## 4.3 Non-Users of mobile internet

### Barriers to take up of mobile internet include concerns about cost, security and reliability

4.3.1 Several participants in this group only used the internet every other day, and typical uses were for email, shopping (Amazon and eBay being major sites used), social networking, and general research (trains, cinema, events, finding out about subjects of interest to them in more depth etc.). Some had jobs or lifestyles which did not allow extensive internet access (nurse, teacher, student with no home connection) and as such



they did not have a very developed internet 'habits', and several were general later adopters in wider technical terms (may have only moved to domestic broadband fairly recently, prefer 'basic' mobile phones etc.):

*'If you think about it, mobile phones in general didn't come out that long ago - so it will still take a while for people to get online on it.'*

Male, Non-User

4.3.2 They had quite vague knowledge of the options for using the internet on the move, and what they did know was based largely on hear-say, with much of their uncertainty caused by media scare-mongering and general nervousness around the unknown.

- Fears were greatest about cost:

*'That person downloaded a film on their phone and it was £31,000. That could be me: the person who doesn't know what to do'*

Non-User, Female

*'I did try it once and it was so slow and I was thinking oh god, this is costing me lots, quick, get out! Get out!'*

Non-User, Male

- Lack of need within their lifestyles also played a part in disinterest:

*'It seems a bit much to be honest, unless your whole job is based around the internet then I don't think you need to be constantly on the computer'*

Male, Non-User

- There was also an issue around reliability and ease of use of mobile internet, with poor quality during trial presenting a barrier to further use. Some had tried to use the internet through their mobile phones in the past and had found the experience poor for various reasons (slow; inability to get onto full websites; drop-outs, physical barriers in using mobile phones, e.g. small screen, etc.) Additionally there was a lack of conviction that the service offers what it should:

*'One of our friends uses it on 3G and I've heard you can't really get network coverage in many places'*

Non-User, Female



- This differs from current users of mobile broadband, in that poor coverage is a deterrent to use for non-users, whereas users continue to use mobile internet despite issues of this nature. This is because users have what they consider to be a need that is motivating enough to pursue the information they are seeking from the mobile internet, and achieving this at the time and place they feel they need it is more important than having a smooth and non-frustrating process along the way. The psychological difference is the presence of a 'need' and experience of the benefits of pursuing the technological issues
- Finally, there were a number of concerns about security: people hacking using Bluetooth, the risk of having phones and laptops stolen when clearly displayed, and worries about becoming "too reliant" on the internet.

#### 4.4 Reasons for take up and use of mobile internet

Internet access on mobile phone handsets was generally available to consumers on their own handsets a long time before they decided to use it

4.4.1 There were a variety of reasons for taking up mobile internet, and variance on this was related to device type. Use of mobile internet with 'normal' mobile phone handsets had often started because of general curiosity or some kind of intense need (urgent need for some form of information). Generally, the service was available on their handset for a long time before they decided to use it. They began using it because it happened to be there, rather than actively sought out a particular handset because it was mobile internet enabled. Their success in initial trials of mobile internet on their handset tended to decide their subsequent use as a supplement to wider internet use (to varying degrees).

**Mobile internet access was a more important part of the purchase decision for those using more 'advanced' devices**

4.4.2 Those using mobile internet through a devices such as an iPhone or Blackberry were much more likely to have selected the device with the intention of using email / mobile internet through the device and in some cases there was a work perspective to this decision (even if the device was not work-funded). Those with these devices tended to be either business users or heavier users, with a general mentality of wanting to be connected and accessible at all times:

*'Mobile internet is a very important part of my life - I don't like it being so vital to me but it is, and its got so much better over the last few years, I'm just using it more and more'*



Female, Heavy user

4.4.3 The iPhone was a slightly different case, with indications that many users selected it as part of a general move to what they clearly hoped would be an overall sleeker, more connected lifestyle, and using the internet offered by the device as part of this.

**USB dongles were often used in conjunction with fixed broadband and some other form of mobile internet**

4.4.4 USB dongles were often used in conjunction with some other form of mobile internet (typically a Blackberry or a normal mobile phone), and as such mobile internet had often been accepted / embraced as a way of making life easier and being able to maintain mobility. This connectivity grew into the (perception of) need for a USB dongle when they realised that the ergonomics of the handsets were too difficult for heavier use. Several people described it as a 'natural progression', to allow better clarity for viewing attachments to emails, and full web page access for certain other services (auctions were mentioned, as well as being able to work properly whilst away from the office):

*'Looking at the little tiny mobile phone screen, you know you can't see what you're doing really can you, you try your best but it's obviously much better looking at the picture on the laptop.'*

Female, Heavy user

4.4.5 The difference between use of mobile internet through a phone and through a USB dongle was between being able to 'dip in' to the internet for quite specific information versus being able to work using the internet in a similar way to office or home use. For leisure users this might involve booking holidays or cinema tickets, looking at maps or accessing Facebook / Instant Messaging, in a less 'fiddly' and more 'natural' way:

*'Filling out a form on the [mobile phone] internet was taking forever, tapping all those crappy little buttons'*

Male, Heavy user

4.4.6 USB dongles had sometimes been suggested and subsequently sold to business users as part of a bundle with their main phone handset (and the USB dongle itself was often free, for use on a pay as you go basis). There was also some evidence of PDA / Blackberries being 'sold' in at upgrade for both business and consumer users. For those



that had purchased these devices more pro-actively, there was a clear drive around autonomy:

*'I was out and about and it was too much of an aggravation in hotels trying to get hold of their card thing, and typing it in...it was a nightmare so I got my dongle'*

Female, SME

*'I will actually use my Blackberry while I am at my office at work - because it is my personal and private connection which no one else is party to'*

Female, Heavy User

*'Its just one of those things; I just like to be online wherever I need to be'*

Female, Heavy User

4.4.7 Finally, one person had selected his USB dongle as an affordable alternative to line rental and stance against BT. This was part of a carefully researched decision at the time he moved to a new home and was in a position to make this kind of review:

*'I only have mobile broadband....I refused to pay BT £150 to set up a landline that I would only use for my computer anyway so I looked at other options and worked out that mobile internet was not maybe as quick but certainly more versatile and actually cheaper'*

Male, Heavy User

4.4.8 This respondent was the only person encountered in this piece for whom selection of a mobile broadband supplier was an extremely high salience decision, with the majority choosing their provider as a by-product of choosing something else (phone, Blackberry etc.) or through merely choosing the first and / or cheapest USB dongle they encountered.

#### 4.5 Use of mobile broadband (in contrast with fixed internet)

##### People with different devices use mobile internet in different ways

4.5.1 The type of websites users accessed was related to the type of device they used. For those with ordinary mobile phone handsets, use of mobile internet was limited to 'downtime' (when people have limited entertainment options, for example whilst on public transport or waiting for someone) and 'distress occasions' (where information is



needed within an urgent timescale). This tended to mean checking sports results, email, news, social networking sites, lottery results, maps, checking eBay bids, or verifying address information:

*'I needed to quickly check to make sure where I was going, so it was really important that I could use the internet just for really that moment in time, otherwise it could have been a disaster'*

Male, Light User

*'You use your mobile as a last resort...some of the pages you look at and half the info won't come up, it's a nightmare coming through.'*

Female, SME

*'My mobile phone is just for checking emails and if I need to check something when I am not at home, but when I am at home its just socialising really, chatting, checking emails and looking at Facebook'*

Male, Heavy user

4.5.2 Those with more specialist handsets (Blackberries, iPhones or PDAs) used mobile internet in a similar way, but many additionally used the mobile internet on their devices for wider research / surfing and more intensive reading or visuals. They tended to be heavier or business users, or desired or required the option of being online at any given time:

*'I never had one but then I got injured and I ended up getting a Blackberry when the time came to upgrade my phone. I rely on it completely now - forget being in the office - I am just on the Blackberry 24/7!'*

Female, SME

*'I work for a music publishing company and I pretty much use the Blackberry all day long for researching; looking up artists, titles, looking at my bank account...its great'*

Male, SME

4.5.3 This more intense and varied use was in part because of the better speed and reliability of the devices, and the easier ergonomics of use (screen size and full keyboard):

*'Since having my iPhone I use the internet on it much more than I would with my old phone. It's slick and easy to use. When I'm at home and could go onto the*





*main internet I'll just sometimes use my iPhone instead - its always on, so I can jump onto a site really quickly, and I just enjoy using it'*

Male, Light user

**Mobile internet use with a USB dongle is a similar experience to fixed internet access, but with some limitations**

4.5.4 USB dongles were generally considered to be closest to the fixed internet experience and the types of sites people visit. People with USB dongles reported using them for longer single periods than those through a handset. However, even the most uninhibited USB dongle users described use patterns that were modified for the (perceived) capabilities of the mobile connection. BBC iPlayer was a good example of a service that many used fairly regularly from home, but did not feel was suitable for use through their mobile internet connection. This applied to all kinds of downloading:

*'I do watch films and download music on my computer at home but I wouldn't with the laptop and dongle, I know it isn't powerful enough'*

Male, SME

4.5.5 Voice over IP was also reserved for use on fixed connections only, and security worries meant that not everyone used online banking through the USB dongle. Concern about cost (justifiably for those with pay as you go arrangements) also meant that some limited their mobile internet use to essentials, particularly work requirements.

4.5.6 Many mobile internet users said they tended to keep an eye out for Wi-Fi hotspots to use wherever possible, as the service was often significantly better in terms of reliability and speed. There was also evidence of people delaying certain internet tasks until they got home due to issues with reliability, especially those using mobile phone handsets:

*'Out and about I would definitely avoid pages with rich content or those not adapted for mobiles - I would wait to get home for anything like that'*

Male, Heavy user

4.5.7 Should these become better on the mobile internet, it is likely that there would be more use of it, and the watchfulness for Wi-Fi hotspots may decrease.

4.5.8 In summary, most mobile internet users make use of it only when there is a need (i.e. they can't access an alternative form of internet but have things they need to do online), or to entertain themselves when on the move. The exceptions to this are:



- If privacy is an issue (or accessing an alternate internet source is too much hassle)
- If quick reference to something is required and the home 'main' computer is switched off or otherwise occupied

4.5.9 Of the three main methods available to access mobile internet, USB dongle use is the closest to people's 'normal' internet use, but is often limited by users due to concerns about their 'power', (or strength in terms of delivering anything rich in content) and / or cost.



## 5. HOW DO PEOPLE THINK ABOUT QUALITY?

### Quality is primarily associated with speed

5.1 People associate quality of service with speed of connection, and this is the terminology that they continually use when discussing the subject. This applies to both fixed and mobile internet. Level of demand for speed is, however, extremely varied between individuals. These variations in demand tended to be based on:

- Length of time with domestic broadband
- Their experience(s) with other broadband sources (home and work primarily)
- Type of internet use - richness of data sought
- Importance of data typically accessed

5.2 Speed is a known marker of quality across different internet types, and this was a decision making factor for many when they selected a fixed provider:

*'I definitely wanted an 8MB connection, but actually there are these tests you can do through the internet and apparently for some people the actual speeds they get is as low as 0.75MB, which is pretty shocking really'*

(Male, Non-User)

### Many are aware that achieved speeds can be below advertised speeds

5.3 Many were also aware of media reports around "promised speeds that are seldom, if ever offered". There is some confusion about who is to blame for the lower speeds offered. As a result of the uncertainty and disillusionment with fixed internet speeds, it seemed that many people hadn't even investigated the speed available for their mobile internet connection, or those who had were reasonably hardened to the idea that this may not always, or in some cases, ever, be the speed actually provided.

5.4 This proliferation of information about variations in quality and what might cause them was common across groups, although at the heart of all this 'noise', most were unsure of the criteria for quality and how they can be reliably assessed, especially for mobile internet:

*'The problem is that every network goes on about how they are the fastest, the best, the this, the that...and I can't see how you are ever going to find a way to validate it'*

Male, SME



*'You can look at a comparison website, or you can look up your postcode in the phone shop to see the strength of the signal but at the end of the day you use these things on the move and neither of those ways will tell you what its going to be like on a train, by the coast, or in a house in the middle of nowhere on your holiday'*

Male, Light User

### **It is difficult to assess quality of connection**

5.5 This difficulty in assessing quality became a recurrent theme, and something that was clearly intangible for the vast majority. Attempts to find a yardstick by which to measure this seemed flawed (is mobile phone coverage for calls the right proxy? Or is it more accurate to think about the speed of the domestic internet - widely felt to be well below advertised rates?). This resulted in a fatigue with the subject for some, and a degree of withdrawal from the subject - many were clearly uncomfortable with the idea that they are unable to state anything about the quality of something they may spend a considerable sum of money on and tried to change the subject:

MODERATOR: *'Did you investigate the quality element of it at all?'*

RESPONDENT: *'I did, I just looked it up, there we go, I get that much for this much. I do a lot of downloading...'*

Male, Heavy User

5.6 This said, having seen the demonstration and discussed the issue in some depth overall, respondents did start to think about other aspects of quality, coverage being the main concern. This was particularly related to coverage in the geographical sense, which is particularly important for mobile internet, given the range of uses consumers have for this resource. The connection between mobile signal and the limitations this may have, and mobile internet, is made on an intuitive basis.

### **Users are forgiving and accepting of poor coverage quality**

5.7 Because people are aware that every network has 'not spots', they accept that mobile internet coverage will also be fallible, and within reason they don't see this as a very serious issue. They are most forgiving of poor coverage when they are out and about, knowing as they do that on a train, for example, maintaining reception on a mobile phone is unlikely, let alone in the newer, and widely accepted less secure world of mobile internet. While they might like this to be better, they are able to work with this for the time being, and see it as a 'fact of life'.



5.8 Reliability was a dimension of quality for some, but because they generally consider mobile internet to be unreliable, it probably did not feature as strongly as it may in the future:

*'If we get to the stage where people go into shops and say yeah what's the fastest download speed you can offer me - if we start asking those questions then of course it is going to sell, but we're not doing that at the moment.'*

Female, Heavy User

5.9 Again we saw a general confusion emerging around what causes internet reliability problems - and the extent to which a mobile internet provider can be held responsible for this. Currently, assumptions about variations in speed of the connection as a result of time of day (e.g. when children come home from school and evenings in general) and quality of the hardware used is diverting some of the 'blame' away from providers.

#### **Mobile internet isn't generally used for data intensive applications at present**

5.10 There was a sense that because some of the data intensive services (for which reliability is more salient) are seldom if ever used on mobile internet, there was little opportunity for it to become an issue. Those accessing the internet through mobile handsets for 'distress and downtime' seemed generally pleased to be able to access the relevant information they were looking for, even if it did take them a few attempts on occasions. As general expectations of quality of mobile internet are fairly low, it will perhaps take some time, and require some improvement in general, before people look at quality of mobile internet in closer detail, rather than simply feeling relieved and/ or grateful to be able to use the internet when they are not near a fixed source.

5.11 Another issue spontaneously raised about quality by some more technologically minded people was the difference between 2G, 3G, 3.5G and 4G. The general perception in this area was that the higher the number of 'G', the better the quality of internet coverage will be. Knowledge around 3G (and more than 3G seems to have come primarily from the mobile phone networks (particularly linked with '3'), and there was a sense that people almost consider 3G a hygiene factor in the selection of high end phones nowadays:

*'I would always go with 3G. I would always make absolutely sure a phone had 3G before I took it, although most of them do anyway. There really isn't any point if you don't have 3G as far as I'm concerned'*

Male, Heavy user



5.12 Although knowledge around this area is hazy, the belief that quality and 3G/ 3.5G are intrinsically linked is firmly embedded with those who consider themselves 'in the know' about such matters:

*'I've got the Nokia N95 which has 3.5G...its much quicker for the internet definitely'*

Male, SME

*'Sometimes I get 3G but not the actual signal on the coast it's different I get bars for the 3G and not bars for the actual network'*

Male, SME



## 6. EXISTING PERCEPTIONS OF MOBILE INTERNET

Those connecting with a USB dongle were more positive about the experience

6.1 Mobile internet users had started to access data on the move for a variety of reasons and had very wide ranging opinions on it. In general, those using USB modems were more positive about the experiences they have than those connecting to the internet through mobile phone handsets, and as a result use reported tended to be heavier.

6.2 Accessing the internet with a normal mobile phone handset was the most criticised method because of the quality, usability and range of content accessible, but given that it provided an internet connection, through a compact device that people always keep with them anyway, most were reasonably satisfied with the level of service provided:

*'Yes it's normally very slow but it's necessary'*

Male, Light user

6.3 Several people were encountered during the research process that had rejected certain mobile internet devices:

*'I did have one of those dongles, but to be honest, I wasn't impressed. I've actually stopped using it now as it wasn't much good for me really'*

Male, light user

6.4 However, this was more common for internet use through mobile phones than USB dongles, and people typically cited ergonomics (e.g. small screens, fiddly buttons) and repeated failures to access the pages they needed as reasons for withdrawal from this form of the service.

**Most people are forgiving of the service - despite imperfections**

6.5 Although the service is felt to be far from perfect at present, it is important to bear in mind that most are extremely forgiving of the service. In addition there is a slight 'halo' around certain devices, notably the iPhone:

*'I love the new iPhone. Yes there have been a few hiccups, but generally its good all round, and I have never had any problems connecting through it when I'm in my home'*

Female, Heavy user



6.6 This was also felt by those using Blackberry for the overall time saving and connectivity offered, and the fact that, for business users, this has allowed them to work in a completely different way than may have been available in the past. This is possibly even more pertinent in the case of USB dongles:

*'When I'm in Ross on Wye I sometimes don't have internet access except via my dongle, so I just have to tolerate it...I suppose the signal's not so bad but it doesn't quite live up to what I'd hoped...'*

Male, Business user

6.7 People see mobile internet as new, and therefore likely to be imperfect, but as yet they feel able to work around any issues. It was interesting that very few had complained to providers about any of the issues they were experiencing, and the only people that had moved away from providers of mobile internet were those using it through their phones, who had moved to other networks because of wider network dissatisfaction (usually voice reception or customer service). Thus confirming that mobile broadband is not a key focus for consumers when considering whether to stick with or switch networks.





## 7. PREFERENCES FOR FUTURE SERVICE LEVELS

7.1 The group discussions included a 30 minute break-out session where a range of devices offering mobile internet were shown at two different quality levels (of which one was superior to the other). Group members were asked to watch the two devices connect to a set task and visually measure the quality differential between the two.

### Demonstrations of different quality showed little difference in basic tasks

7.2 Very few felt there was any relevant difference in terms of speed between the simpler tasks demonstrated at the different quality levels (simple text-based searches, loading a news story from [www.bbc.co.uk/news](http://www.bbc.co.uk/news), downloading a ringtone from the Nokia website through a Nokia handset and accessing the Ofcom homepage through an Archos media tablet).

### Most didn't see the lower speed as a big problem

7.3 A more distinct and relevant difference was seen during the playing back of videos through the BBC website and on the Archos media tablet and downloading a 15Mb podcast from the Heart FM website on the laptop, although this impacted on people to varying degrees. The majority were reasonably forgiving of the slower speed, on the basis that:

- Mobile internet is still largely a back up, so quality is less important than on their main internet source
- Because it only tends to be used as a supplementary access channel, most don't, and may not even consider, performing more data intense functions (downloading podcasts, watching video streaming etc.) through it, so found it hard to relate to the idea of frustration that may be caused by poor quality / delay, etc.
- Users don't expect mobile internet connections to be comparable with their home internet connection, so are largely forgiving of any flaws in quality terms - these connections still allow them to perform functions they would not otherwise be able to carry out at all and this is the main thing for many:

*'As long as you can connect, it doesn't matter if it fails once or twice, as long as you know eventually you will get it'*

Male, Light User

- Those who may have only recently moved from narrowband connections at home (non-mobile internet user groups mainly), felt that even the poorer quality connection was still better than this form of access



- They considered a difference of a few seconds in play time too small to be significant, and many felt that people would have to be extremely busy or stressed to feel this was a big problem.

#### There are other barriers to change in use of mobile internet

7.4 There was also a general issue with mobile internet related to ergonomics and intensity of need, leading some to feel that quality improvements are not enough to drive changes in behaviour:

*'I don't think the speed makes much difference, there is still the small handset, I would rather use these kind of functions more on my internet at home rather than hanging around on the phone handset'*

Female, Light User

7.5 This is not to say that users would not all prefer the faster and more reliable service level offered by the better quality connections demonstrated, but they were extremely tolerant of lower quality, and did not feel that the differentiation was sufficient to merit additional expenditure, or for many even to notice if it wasn't shown in comparison to anything else. Most light and non-mobile internet users (as well as some of the business groups and heavier users) were not interested in making comparisons in this way, and found the idea of going through a process of evaluation of quality unusual. For lighter users, the impact may be more related to frequency and / or weight of use should the higher quality become standard:

*'I would probably use it more, like, if I was checking a map or just checking my emails and it was that fast, I would probably do a couple of other things while I was there as well'*

Male, Light User

#### Heavier users are most likely to consider switching supplier for better quality

7.6 Those that felt that this would have more of an impact on their choices tended to be heavier users who were impressed with the difference in quality and felt it would make an impact on their use. However, even these users had doubts about 'jumping in' and making changes, due to the number of variables to consider in such a move:



*'It's not a simple thing you know, give this guy £21 a month as opposed to £20 a month and have a faster service, because you've got to spend another £200 on the equipment that makes that service worth having. There is an awful lot to think about and if you're not using that, if you're not regularly going to You Tube on your hand held, day in day out, or what have you. But I will also come back that if they come in with a gimmick that we all want, but we need that faster service for it to work, then yeah there is potential there.'*

Male, Heavy user



## 8. IMPACT ON PROVIDER AND SERVICE CHOICE

### 8.1 Switching provider

Very few thought that they would pay more for a higher quality service

8.1.1. The demonstration was impactful, but very few participants felt that they would react in by either paying an additional fee for the higher quality or changing provider. This is partly to do with a strong embedded belief that providers will always assimilate their offerings within a relatively brief timescale, and partly because for the kind of usage users and non-users alike envisage for mobile internet, speed of downloading or watching video streaming is not important at the moment.

**There was an expectation that other suppliers would soon catch up if one offered something better**

8.1.2 This is how the mobile phone market is perceived in terms of tariff, handsets and services offered:

*'It would go to all the providers eventually. Three started it off I think...They are all in competition and once one does it, they all have to do it, and then the price will come down'*

Male, Heavy User

*'There are so many competitors in the market they are always improving quality to beat each other. I mean the latest one [ISP x] with fibre optic broadband. I mean their main competitor is [ISP y]; you are expecting [ISP y] to then come up with something to beat that. So it's changing every day and it's changing for the better'*

Female, Heavy User

**Consumers have limited ability to actually compare speeds of different networks**

8.1.3 Part of the problem for users in making decisions about supplier choice and switching is related to the immense difficulty of recognising poor service without anything to compare it to (consumers normally will only have one USB dongle or phone handset, so are not sure if poor quality experienced is better or worse compared to anyone else). A further problem is gaining any sense of certainty about competitor offerings - consumers are unsure what they would 'look for' to be sure that a switch is



worthwhile and the new offering would be any better in practice. In such an environment, many people will prefer to stick to 'the devil they know':

*'That's why they will have to educate, they are going to have to educate you, because not everyone is tech happy. And people will stick with the old supplier, if there is nothing wrong with it, don't change it!'*

Female, Heavy User

*'To me it is more hassle to change provider than save a millisecond here and there. And that's if they can prove I would save that millisecond!'*

Male, Heavy user

8.1.4 With what is currently considered to be a relatively new service, establishing criteria to justify switching does not come naturally and may not even be a consideration unless there is a reason to believe that mobile internet *per se* is not all very similar in quality:

*'If I was there on my own, it's different. In the example you gave us, you can compare the speeds and you can see. If it's stopping and starting all the time, yes, okay, you work out something is wrong. But other than that you just get on with it, you go along happily, unless someone is there to tell you its not quite right, or theirs is quicker'*

Female, Heavy user

8.1.5 At the moment the only evidence most people would find compelling in this area is word of mouth recommendation, and if they came across someone with a significantly different experience on a different network, they may then consider switching.

**USB dongle users were more open to supplier switching as it would be low risk**

8.1.6 It is important to distinguish between people's willingness to change provider for different types of mobile internet access. Those who currently use USB dongles to use the internet when away from home were much more open to changing provider as the dongle is a product with sole focus on internet access. Getting a better quality version of that internet access is a clearer aim than in amongst the more complex decision making hierarchy of a 'suite' of mobile services to a multi-purpose device such as the mobile phone, or indeed the domestic internet connection which is now so often linked with a bundle of other services. There is also generally held to be less 'point' in changing the domestic internet supplier as there is a vague awareness that the line through which it is



delivered is the same no matter who the supplier (excluding cable), so changes would typically only occur if there were a very serious issue in quality or price terms, or as a result of a serious customer service issue.

### Heavier users are most likely to consider switching for better quality

8.1.7 Three of the eight heavy user respondents in London felt this would be worth switching provider for (if the higher quality level could be guaranteed). In Cardiff, heavy users were more service orientated (and most were not yet using services that they felt would be impacted greatly by the higher quality version seen in the demo), but the majority would switch provider for their USB dongles if this better service were available at the same price:

*'Yes, I mean why not? Its not something I would want to spend much more than I already do on, but if it was the same price and I knew it would be better, faster, and what have you, then yes, I would'*

Male, Heavy User

*'I play a lot of games and sometimes there can be a lag [on the fixed internet] and that does spoil the thrill of the game. So why not offer a better connection speed, yeah, that would be valuable to me. Although again, often the server is over subscribed and whatever your connection speed you are not going to get the speed. So I don't know.'*

Male, Heavy user

*'I would pay for it with my iPhone but if I still had my Blackberry I wouldn't pay for it, because with the iPhone you can look at web pages the way they are meant to look and I would use it for that so but if you have got any other kind of Blackberry then I wouldn't pay for it'.*

Female, Heavy User

8.1.8 In the last example it seems she is prepared to consider switching if she had an iPhone because she is positioning the device as a proxy for a laptop in her mind.

8.1.9 Those who use mobile broadband through their phone handset were much more reluctant to consider switching, for a variety of reasons:



- The phone is primarily used for voice and text, and the quality of these 'core' aspects always comes first, especially as the type of people using mobile internet are often keen communicators in general - hence concern around call/ text/ reception are probably more important than mobile internet
- Other considerations, such as handset type or model, take much more of the attention in decision making - data users are not choosing their payment models on the phone on data arrangements at the moment, so it is likely to be some time before this comes to the fore (if at all)
- A mobile phone internet connection is much more likely to be a secondary way of access the internet (dongle users can at least access all sites, which phone users can't). A mobile phone handset is not good enough to use for long periods / intense data.
- A mobile phone is one of their largest monthly outgoings for many, plus one of longer contract types - so from a cost perspective people are nervous about switching (especially because of the potential of 'hidden extras', of which data charges are sometimes considered one)

## 8.2 Paying a premium for better quality mobile internet

### Cost is the most important factor in supplier choice

8.2.1 Cost was cited as a primary consideration in the choice of both existing phone arrangements (for contract as well as pay-as-you-go), and broadband supplier at home. In the mobile phone decision, the only factors commonly cited alongside the consideration of cost were handset availability and occasionally coverage (apart from a minority who spoke about customer service). For home broadband cost was again the most important factor in the decision, with customer service possibly featuring for the less confident or those who had had bad experiences. This sets the precedent for the way people think about payment for mobile internet, and it is notable that many people with USB dongles had been given these for free by their networks, placing them yet further away from the notion of mobile broadband as an premium commodity.

8.2.2 The possibility of premium quality mobile internet becoming available for a premium price was something that was not warmly received by the groups we encountered. There was a general perception that internet service at home were 'free' or at least very cheap, because of the way they tended to buy it as part of a larger bundle and some providers described it to them as 'free broadband':



*'My home internet is free with Orange; it was just free on the package that I've got for my mobile, so I saw it as a good thing. I'd been with them for years anyway with no problems so I was happy to take a chance on their internet service'*

Female, Heavy user

*'Everyone's offering the free broadband now; [supplier names] I think do it'*

Female, Non-mobile internet user

8.2.3 The way that communications products are sold by many suppliers has led to a vague idea that services such as telephone calls and internet do not cost providers very much, if anything, to deliver, and hence people object to the idea of paying for them, especially at premium rates. There is the additional embedded issue that for those who feel that they receive 'free' internet at home, the idea of paying a high monthly fee for internet outside the home (which they will use less often), may not feel intuitively sensible.

8.2.4 There was also a limited degree of misapprehension that led people to feel that greater speed might save them money (hence might be worth extra investment initially). This reflects a still widespread lack of understanding around how mobile broadband is charged for (and a belief, possibly from the charging structure of narrowband internet that it is by the minute / second):

*'It is not a priority for me in my budget at present, but if being faster will make it more cost effective for me, and I don't have to spend so much while I am on the mobile broadband, then I may possibly be willing to switch and pay the extra'*

Female, Light User

8.2.5 In summary, the environment for different payment levels for differing service levels of mobile internet does not yet exist. Differentials that can be proven, measured and compared with some degree of certainty would have to be available before competitiveness could be impacted in this arena. While mobile internet is still considered to be, new, useful, but almost expected to be fallible, offering premium packages with higher quality connection (for a higher price point) is unlikely to impact any but the most engaged who have some sort of reason to believe the price difference is justified.





### 8.3 Service Choice

**Coverage is not top of mind in quality considerations, but when considered fully is more important than speed, which comes to mind more instinctively**

8.3.1 People expect lower speeds from mobile internet than from a fixed internet connection, but are less forgiving when it comes to coverage. The occasions where the ability to use the internet on the move are valued most is when there is no other option, and information is needed urgently - whether that is for picking up a work-related email or finding a map to stop someone getting lost in a strange part of town. Business users are especially fixed in this mindset. However, mobile internet network is still not being selected on the basis of coverage because there is no fixed method for comparative evaluation, and, as we have seen for mobile phones, handset, price, customer service and a range of other factors are closer to top of mind in the decision-making process.

8.3.2 In the vast majority of cases, it is ability to connect, rather than the speed of that connection, that will differentiate between satisfaction and frustration with the service. Lower speeds, with a greater range of coverage both indoors and outdoors, would be the optimal service for most users, over and above higher speeds with limits to coverage and locations for use. Whilst this may appear to counter all that has been said about the automatic mental connection between quality and speed, it must be kept in mind that whilst this association exists, it is not yet expected of mobile internet.

8.3.3 It is likely that if the service improves over time, to the point where connection is usually achievable without issue, the focus will turn more to quality, in particular speed, and at this stage the landscape may become differentiated. This still relies on availability of accurate comparison mechanisms that people are able to use with a degree of faith, as well as a much wider degree of discussion, both in the media and between individuals, about the relative inputs that drive higher quality connections, and which providers are offering them.



# *ANNEX 1*



## Topic Guide

*Objective: To understand the importance of different levels of mobile broadband service quality to consumers and how likely consumers might be to switch from one service supplier to another as a consequence*

### 1. MODERATOR INTRODUCTION

**Introduce Illuminas:** An independent market research company.

**Introduce research:** We are currently undertaking a research study on behalf of Ofcom, the UK's independent regulator and competition authority for the communications industries who are trying to understand your usage of the internet and how it might change in the future.

**Explain Market Research Society code of conduct:** All information remains absolutely confidential and no individuals or organisations will be mentioned in our findings documents - and we would like to re-assure you that there will be no sales follow-up.



## 2. INTRODUCTIONS (5 MINS)

Name, age, work status, internet use (main sites)

## 3. INTERNET USAGE (10 MINS)

Current usage of internet

Time (duration/ frequency)

Range of devices used and reason behind this range - what role does each play/  
don't play?

Fixed broadband

Mobile broadband using a laptop (USB modem)

Internet on your mobile phone

Iphone

Wi-Fi

How long have you used each?

For those not used - why not? Have you ever tried it? What was the experience like?

Do you think this might change in the future?

Pros/ cons of each type of internet

For those that use Wi-Fi, do you know what speed you get over fixed  
broadband? What difference does it make?

Range of services used

Locations

Reliance on internet

Work vs. personal use

How has internet usage changed in terms of...? In what timeframe?

Devices

Services

Locations

What has made the changes come about?

Quality of service has increased

Wider variety of services available

Increasing 'need' to use service (what does 'need' mean to them in this  
context?)

Other



#### 4. INTERNET PROVIDERS (10 MINS)

Which internet providers are you aware of on the market currently?

Probe for fixed providers

Probe for mobile internet (i.e. USB modem)

What do you know about existing internet providers on the market? How do they differ?

Spontaneous

*Use showcards of providers to prompt discussion - which ones are good? Which are bad?*

- Price
- Quality - in what way does the quality vary?
- Spontaneous and then probe on...
  - Speed
  - Locations available
  - Reliability of connection

How did you become aware of differences between providers?

- Word of mouth
- Press
- Previous experience with service/ another service they operate
- Third party reviews in magazines/newspapers and websites

■ Why did you choose your current mobile / fixed broadband provider?

What factors did you consider?

How is this different from other services? Why?

Why did you ultimately choose the provider you are now with?

How knowledgeable would you say you were about the market beforehand?

If any have the same provider for mobile, fixed ISP and USB modem, why is this?

Probe to understand perceived links between services, i.e. if call voice quality is bad would you expect internet quality to be bad as well?

How many different providers have you been with?

SWITCHERS: What if anything made them switch?

LOYAL: Why have they stayed with their existing provider?



- For current non-users of USB modem, what would you look for when choosing a mobile broadband (USB modem) provider? Why?

Probe: If 'quality' or associated mentioned, what do you mean?

## 5. PERCEPTION OF QUALITY (15 MINS)

How important is 'quality' in the internet services you use presently?

What do you mean by 'quality'?

What are the criteria for 'quality'?

Can you measure it?

*Use showcards of service dimensions to understand relative importance of quality in your mobile phone service*

- Mobile voice quality
- Mobile text quality
- Mobile data quality
- Network customer service
- Voice, text and data costs
- Other mobile services
- Promotions, offers, etc.
- Mobile handsets

Ranking of importance of service dimensions and reason for position

*Use showcards of quality dimensions to understand differing dimensions of quality, i.e.*

How (if at all) does quality of internet vary?

When does/ would quality start to become an issue? (I.e. how bad would it have to be?)

What is ok and what is not ok? And how does this vary by...?

Services you're using

Expectations from different devices

Time of day

What do you think causes variations in quality?

Has it affected your behaviour at all? How? To what extent? Why/ why not?

Actual internet usage



- Noticed
- Got frustrated
- Used it less
- Use at different /specific times only
- Stopped using certain services (which ones?)
- Bought additional devices to use in certain locations (which ones?)
- Don't use in certain locations (which ones?)

Complained to/ changed service provider

- Indoor coverage - variability within buildings
- Geographical coverage - variability by area e.g. urban v rural etc.
- Immediate locality - variability of usage vicinity - e.g. trains, cafes, office etc
- Reliability - connectivity, drop outs, connection time frames
- Latency/delay - degree of delay from selecting to download of web pages
- Data rate - including fluctuations in data rates, at different times of day, or differing location

## 6. SCENARIO TESTING (35 MINS)

Quality of mobile broadband services may improve in the future, but providers might not all offer the same level of quality. We are now going to explain and show some scenarios as to how the quality of mobile broadband services could vary.

*Rotate order of scenarios every group*

For each demonstration...

Spontaneous reaction to demos

Comparison to each other

How different are they?

How important is this difference to you? Would it make a difference?

Comparison to existing service levels - to what extent is it different to what they currently experience

- How does it compare to fixed broadband?
- How does it compare to Wi-Fi?



- How does it compare to internet on your mobile (handset)? (USERS only)
- How does it compare to the mobile internet via laptop/ mobile broadband? (USERS only)

Suitability for (PRE-CODED LIST):

Services

Devices

Locations

Overall rating of quality on 10-point scale

Relative value for each of the quality scenarios (how much prepared to pay for each) on each device

How much more would they be prepared to pay then currently?

For each device... whether availability of this quality could impact choice of supplier and/ or propensity to switch compared to the different internet services they use currently in the way that they use the internet currently

NOTE: For mobile broadband via handset, this would mean its effect on choice of mobile network (e.g. compared the voice and text service they offer)

Where would this come in terms of priorities?

## 7. FUTURE INTENT (20 MINS)

- How do you imagine your internet usage will change? Why?

Frequency/reliance

Wider range and type of services used

More/ fewer devices used to access internet

Locations

When do you think this will happen? (timescale)

Within next 12 months

Longer term

*Ensure respondents are considering likely socio economic changes, i.e.*

*When more people have it*

*When cost meets my budget*

*When it's easier to access*





Gossip box exercise:

Here are some things other people have told us about using the internet when they are on the move. Please tell us what you think about them and the type of person who would say them:

- It has been such a relief to be able to use the internet when I am on the move that I don't worry too much about the odd failure in service
- Mobile broadband (USB modem) is a fairly new service so I wouldn't expect it to be perfect yet
- I need to be able to rely on the internet wherever I am and whenever it is
- Mobile broadband (USB modem or internet on mobile phone) will never be my sole form of internet access
- If I am using mobile broadband (USB modem or internet on mobile phone) for certain services I am more demanding than for others

How do you expect quality to change?

When do you think this will happen? (timescale)

- Within next 12 months
- Longer term

Do you need quality to improve?

In what situations do you want/ need quality to change/ improve?

(And which do you not?)

*SHOW HANDOUTS AND DISCUSS IMPORTANCE OF DIFFERENCES IN QUALITY*



## Mobile broadband – lower quality



- **Lower** quality mobile broadband means that you could access the internet using a laptop, mobile phone or another device in many locations.
- You may find that it is difficult to connect or you get a very slow connection inside some buildings or in some other locations.
- You'll usually be able to access fairly plain websites like Google very quickly.
- Websites with lots of graphics, like BBC News might take a few seconds to appear.
- Short video clips will be slow to load and when streaming (watching as you download) may jump or get 'stuck'.
- Downloading a 15Mb audio file might take about 10 minutes.

## Mobile broadband – higher quality



- **Higher** quality mobile broadband means that you could access the internet using a laptop, mobile phone or another device in many locations.
- You will usually be able to connect, though you may find the connection is more like the lower quality speed inside some buildings or in some other locations.
- You'll usually be able to access plain websites like Google very quickly.
- You'll usually be able to access websites with lots of graphics, like BBC News very quickly.
- Short video clips will take a few seconds to load and will usually play without interruption when streaming (watching as you download).
- Downloading a 15Mb audio file might take about 2 ½ minutes.

How likely is it to affect your choice of provider? To what extent?

Mobile network (internet on your mobile handset)

Would the quality of the internet on your handset prompt you to switch providers? Why/ why not?

Mobile broadband (USB modem)



How would you choose your mobile broadband provider? What other factors would be important?

Wider context considerations

Establish where quality fits within the raft of decision criteria

#### 8. SUMMARY AND CONCLUSIONS (5 MINS)

Priorities for internet providers now

Reaction to different scenarios

Priorities for internet providers in the future

Mobile network provider (i.e. handset)

Mobile broadband provider (i.e. internet via your laptop)



## Demonstrations for 2G liberalisation focus groups

### 2G iPhone

The first iPhone had features limited because of the lack of 3G support. For example it would allow the user to view YouTube videos or BBC iPlayer when connected via Wi-Fi but not when using the 2G GPRS connection.

### Laptops

Side by side comparisons of the speed of the following:

- Simple text-based web page loading (a Google search)
- More complex web page loading (main story from [www.bbc.co.uk/news](http://www.bbc.co.uk/news))
- NB Optional playback of video from story or BBC News channel link on page header
- Download of a 15Mb Heart FM podcast

### Archos portable media devices/web tablets

Side by side comparisons of the speed of the following:

- Speed of Ofcom home page loading
- Playing a streaming video file from Daily Motion UGC website

### 3G phones

Side by side comparisons of the speed of **one** of the following:

Either Nokia N93i 'camera' phones

- Take photo and upload to Vox blog

OR Nokia E71 'blackberry' phones

- Download ringtone from Nokia website

Demonstrate that there is little difference in the speed of a mobile web page loading (e.g. BBC mobile home page) because they have been optimised to work via 2G.