



**Evaluating ISP compliance
with the Broadband Speeds
Voluntary Code of Practice:
Market research report, additional data**



Research report

28 April 2010

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Section 1

Executive summary

1.1 Introduction

In June 2008 Ofcom introduced a Voluntary Code of Practice on Broadband Speeds (the 'Code') with the aim of improving the quality of information on broadband speeds available to consumers (see Annex A). The aim of this research is to explore the extent to which internet service providers ('ISPs') are adhering to the Code.

The specific objectives for this research are to establish the proportion of consumers being given accurate access line speeds and to understand whether ISPs are abiding by the Code's requirements. In March 2010, Ofcom published a report¹ which set out the findings of the research on an industry-wide basis. This present report provides additional data to the previously published report since it now includes ISP-specific data for those ISPs for whom there was a robust sample. Ofcom did not include such data in the published report as the differences between ISPs were not, in most cases, statistically significant. The presentation of observed, but non-significant, differences could therefore have been incorrectly interpreted as genuine differences between ISPs, where the observed differences could in fact have occurred by chance.

Furthermore, the research did not reveal that one or more ISPs had a consistently significantly worse or better level of compliance across all aspects of the Code than other ISPs. Instead, the key results indicated that there were general, industry-wide issues which meant that compliance with certain aspects of the Code fell short of the level which would meet consumers' expectations. The results also identified that the main reason why compliance with the Code is inadequate in some areas is because the line checkers used by ISPs to provide consumers with an estimate of their maximum line speeds are not fully accurate or consistent.

Hence Ofcom intends to ensure that consumers get the information they need to make informed choices by strengthening the Voluntary Code of Practice on Broadband Speeds². This will allow, with the industry's co-operation, the problems identified to be solved at an industry-wide level across all signatories of the Code. Further details of Ofcom's proposed actions are set out in the policy report³ which was published alongside the mystery shopping research report.

Ofcom is now publishing this revised version of the research report following a request under the Freedom of Information Act 2000 which requested data on how individual ISPs performed in the mystery shopping exercise. The report should be read in conjunction with our previous mystery shopping research reports.

¹ http://www.ofcom.org.uk/telecoms/ioi/copbb/voluntary_code_copbb/Synovate_report.pdf

² <http://www.ofcom.org.uk/telecoms/ioi/copbb/copbb>

³ http://www.ofcom.org.uk/telecoms/ioi/copbb/voluntary_code_copbb/Mystery_shopping_report.pdf

1.2 Methodology and Sample

A quantitative mystery shopping approach was used, covering both website and telephone sales routes. The multi-stage process involved executive evaluations of ISPs' websites, mystery shopper evaluations of ISPs' website and telephone call centres (in the scenario of switching broadband supplier), and mystery shoppers' recordings of their actual broadband speed as measured by a BBC iPlayer speed test undertaken on their PC outside peak hours. A total of 1,289 shops were conducted across a range of ISPs. Shops were conducted between 30th October and 30th November 2009, across England, Scotland and Wales. Where small base sizes are used this is indicated.

1.3 Key findings

The results show that there were few statistically significant differences between ISPs in their observed level of compliance with the Code. Statistically significant differences are those differences which have a low probability of having occurred by chance. The results show that where differences were observed between ISPs the differences were not, in most cases, statistically significant, i.e. the observed differences are unlikely to represent genuine differences between ISPs' level of compliance with the Code. In this present report, we publish ISP-specific data and indicate those differences where there is a statistically significant difference. All other observed differences (i.e. those not specifically indicated) between ISPs are not statistically significant and hence meaningful conclusions cannot be drawn from them.

1.4 Overview of findings

- Access line speeds (i.e. the maximum download speed a customer's broadband line is capable of achieving) were generally – but not always – provided during telephone mystery shops with ISPs. However in many cases this information was only provided after being requested towards the end of the sales process.
- Access line speeds were generally accessible through ISPs' websites. However, the access line speeds given by ISPs via telephone and websites frequently did not match.
- Estimated access line speeds often varied between different ISPs for the same line. Additionally, in some cases, estimates were often given in the form of a wide range.
- Mystery shoppers were not, in most cases, provided with clear or full information in relation to the fact that actual speeds are likely to be below access line speeds.

1.5 Information at point of sale

The 2nd Principle of the Code requires that ISPs provide all consumers within the sales process with information on their estimated access line speed, regardless of whether this is over the phone, in a retail shop or through the ISP's website. The majority of shoppers were provided with an access line speed during telephone shops with the ISPs. However, there was also evidence that ISPs do not adhere to all of the requirements within the 2nd Principle:

- 15% of shoppers failed to get an access line speed during the telephone shop.
- 42% of shoppers had to prompt to get an access line speed. This was provided unprompted in 43% of shops.
- 21% of shoppers failed to get an access line speed through the ISP's website.
- 40% of telephone shoppers were informed that the access line speed was only an estimate.
- 31% of telephone shoppers were informed that the actual speeds are dependent on a number of factors.
- Only 9% of shops were informed of the times of day when they would be likely to experience lower broadband speeds (when the network is most congested).

1.6 Accuracy of information on access line speed

The 3rd Principle of the Code requires that information initially provided to consumers by ISPs remains as accurate as possible. There was considerable variability in the estimates of access line speed provided by different ISPs for the same line.

- 43% of access line speed estimates matched (within +/-1 Mbit/s) the speeds as measured by BT Wholesale Line Checker which we used as a common benchmark (it is not necessarily more accurate than individual ISPs' line checkers).
- Around 1 in 5 access line speed estimates matched (within +/-1 Mbit/s) the actual speed estimates provided by an online speed test, indicating that actual speeds are usually below access line speeds.

1.7 Training

The 1st Principle states that 'ISPs must use their best endeavours to procure that all of their representatives (including all of their officers and employees and any agents or sub-contractors) involved in selling or promoting their broadband services are trained appropriately and that they have sufficient understanding of the products and services they are promoting and selling.' Results indicated that ISPs could do more to ensure that their sales agents were fully knowledgeable.

- ISP customer agents were perceived as being 'knowledgeable' in 43% of telephone mystery shops.
- ISP customer agents were perceived as being 'helpful' in 48% of telephone mystery shops.
- On average, customer agents were not clear in explaining to mystery shoppers that the actual speed they might experience is likely to be lower than the estimated access line

speed. They were perceived as being 'clear' about this issue in 28% of shops. They were perceived as being generally 'not clear' for 53% of shops.

1.8 Presentation of broadband information on the website

The 5th Principle states that ISPs should aim to ensure that information related to fair usage policies, usage limits, traffic management and traffic shaping are clear and easily accessible to consumers.

The ISPs assessed comply with the majority of the Code on their websites. However, there is scope for improvement.

- In many cases, the information provided could be more prominent, clear and concise.
- The area that the ISPs do not comply with the code is not mentioning the times of day the network is most likely to be congested.

1.9 Consumers' awareness of ISPs' adoption of the Code

The 8th Principle states that ISPs should make reference to the Code within the sales process, and provide a full copy of the Code through an easily accessible link on their respective website.

- Overall, ISPs mentioned the Code in only 8% of telephone mystery shops, while 18 out of the 27 websites assessed provided a link to the Code

Section 2

Background and objectives

2.1 Background

In June 2008 Ofcom introduced a Voluntary Code of Practice on Broadband Speeds (the 'Code') with the aim of improving the quality of information on broadband speeds available to consumers (see Annex 1).

The Code has eight principles, broadly summarised below.

- **1st Principle: Training.**
Internet service providers ('ISPs') must aim to ensure all of their representatives are trained appropriately, have sufficient understanding of what they are promoting / selling, and be aware of the Code.
- **2nd Principle: Information at point of sale.**
ISPs must ensure that consumers can make informed decisions and choices about what they are buying, including providing information on maximum broadband speeds (access line speed) available and ensuring consumers are aware that the Actual Speed they experience can be lower than the estimated access line speed and the advertised (Headline Speed). This information should be available through all consumer channels, and must include an online facility to easily identify the consumer's broadband speed. A durable record of the estimated access line speed should be provided at point of sale.
- **3rd Principle: Accuracy of information on access line speed provided by ISPs.**
Information from ISPs should remain as accurate as possible.
- **4th Principle: Managing consumers' speed-related problems.**
ISPs should be prepared to manage customers' problems with broadband speeds when reported. Consumers should be allowed to move to a different package without penalty (if available) if they are consistently unable to receive the estimated access line speed provided at the point of sale and the problem cannot be resolved.
- **5th Principle: Presentation of broadband information on the website.**
This supplements and extends the 2nd Principle of the Code. ISPs should aim to ensure that information related to fair usage policies, usage limits, traffic management and traffic shaping are clear and easily accessible to consumers.
- **6th Principle: Timescales.**
ISPs must aim to ensure they adhere to the Code within six months of signing up to it.
- **7th Principle: Monitoring of compliance with this Code.**
ISPs should co-operate as fully as possible with Ofcom to meet Code requirements.

Ofcom intends to monitor compliance with the Code, for example by it or its agents carrying out mystery shopping exercises.

- **8th Principle: Consumers' awareness of ISPs' adoption of this Code.**
ISPs signed up to the Code should make reference to this within the sales process, and provide clear access to the details of Code

The aim of this research is to explore more fully the extent to which ISPs are adhering to the Code. Research is particularly focused on adherence to the 2nd, 3rd, 5th and 6th Principles of the Code.

2.2 Objectives

The specific objectives for this research were as follows.

- Establish whether consumers are being given accurate access line speeds during the broadband sales process.
- Understand whether ISPs are abiding by the Code's requirements.
- Undertake analysis and identify issues that contribute to differences in performance.

Section 3

Research approach

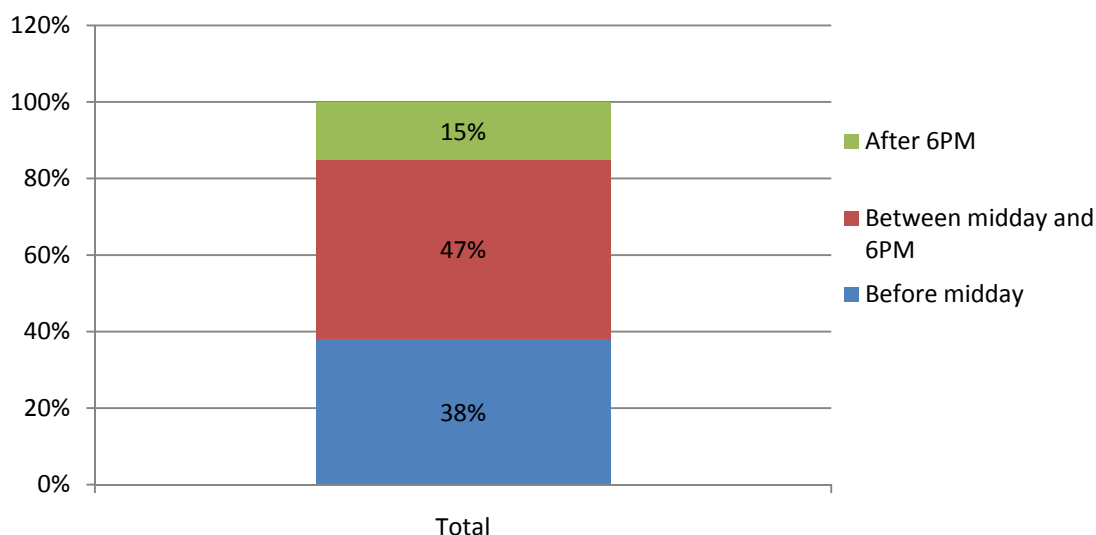
A quantitative mystery shopping approach was used, covering both website and telephone sales routes. The multi-stage process involved executive evaluations of ISPs' websites, mystery shopper evaluations of telephone shops (in the scenario of switching broadband supplier) and website speed checkers. Mystery shoppers also recorded an estimate of their actual broadband speed as measured by a BBC iPlayer speed test undertaken on their PC out of peak hours.

A total of 1,289 shops were conducted across a range of ISPs, including the largest ISPs. Research was conducted to explore the adherence to the Code by all current code signatories, with over a 100 shops for the largest providers and approximately 20 with medium sized providers (See Annex F).

Ofcom/Synovate shared the research findings (where sufficient data was collected) with individual ISPs for the purpose of process quality assurance. Feedback from these discussions was taken into account in compiling the final results.

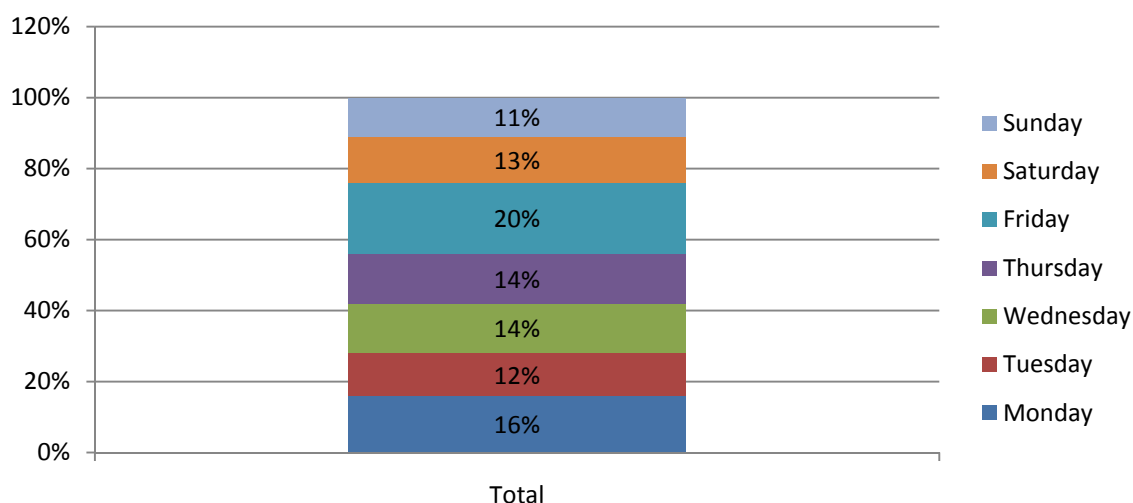
Shops were conducted between 30th October and 30th November 2009, across England, Scotland and Wales. The day of the week; time quotas; and distribution of shops is shown in Figures 1a and 1b below.

Figure 1a: Time of Day - ISP Telephone Shop



Base: Total shops (1239)

Figure 1b: Day of Week - ISP Telephone Shop



Base: Total shops (1239)

All participants obtained an estimate from the BT Wholesale line checker (using their telephone number or postcode) to qualify for the mystery shopping exercise, and provided their estimated maximum for one or both of an ADSL2+ and ADSL Max line.

Initial analysis of whether mystery shoppers were provided with an access line speed showed that the results were dependent on the mystery shopper's current ISP. Current customers of TalkTalk (who frequently employ full local-loop unbundling) and Virgin Media (whose customers often do not have a non-cable phone line) were significantly less likely to be provided with an access line speed from another ISP

The published findings include the results for Mystery Shoppers currently with a DSL ISP but exclude all current Virgin subscribers as we were unable to definitively determine whether the mystery shoppers were current Virgin DSL or Virgin Cable customers.

Further details of the methodology can be found in Annexes B, D, E and F. The mystery shopping evaluation script can be found in Annex C. The charts in this report draw attention to those differences which are statistically significant to a 99% confidence interval. Differences which are statistically significant to this level of confidence are circled, i.e. the circled results are either significantly higher or lower than the other results.

The results set out in the report show that there were few statistically significant differences between ISPs in their observed level of compliance with the Code. Statistically significant differences are those differences which have a low probability of having occurred by chance. The results show that where differences were observed between ISPs the differences were not, in most cases, statistically significant, i.e. they are likely to have been caused by chance rather than representing genuine differences between ISPs' level of compliance with the Code. In this report, we publish ISP-specific data and indicate those differences where there is a statistically significant difference to a 99% level of confidence. All other observed differences (i.e. those not specifically indicated) between ISPs are not statistically significant and hence meaningful conclusions cannot be drawn from them.

Section 4

Adherence to the 2nd Principle: Information at point of sale

4.1 Overview

The 2nd Principle requires that ISPs provide all consumers within the sales process with information on their estimated access line speed, regardless of whether this is over the phone, in a retail shop or through the ISP's website.

The majority of shoppers were provided with an access line speed during telephone calls with the ISPs. However, there was also some evidence that ISPs were not adhering to several of the guidelines within the 2nd Principle:

- 15% of shops failed to get an access line speed during the telephone shop, although in 6% of total cases this was because the line checker was temporarily unavailable or the line in question was not recognised. 21% of shops failed to get an access line speed through the ISP's website.
- 42% of telephone shops had to ask to get an access line speed as a result of the fact that they had not been provided with an access line speed before being asked for bank details or a MAC code or when the shopper considered the sales call was concluding.
- Only 6% of telephone shops were provided with a durable record of the estimated access line speed at point of sale.
- 40% of telephone shops were informed that the access line speed was only an estimate.
- 31% of telephone shops were informed that actual line speeds are dependent on a number of factors.
- Only 9% of telephone shops were informed of the times of day when they would be likely to experience lower actual speeds (when the network is most congested).
- Differences in the performance of different ISPs were not, in most cases, statistically significant and hence meaningful conclusions cannot be drawn from them. Throughout the report differences in ISPs' performance which are statistically significant are highlighted by a circle; all other differences between ISPs are not statistically significant.

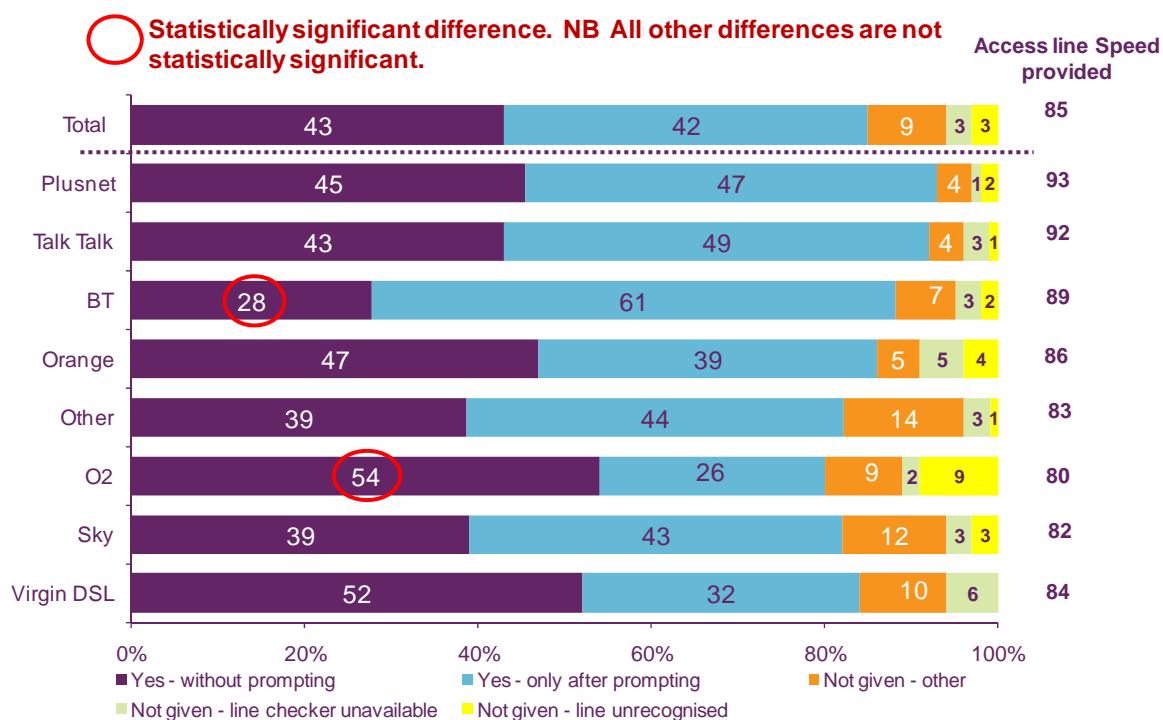
4.2 Estimates of access line speed

4.2.1 Access line speed provided via telephone contact with ISP

15% of shops failed to get an access line speed during the telephone shop. 42% of shops had to prompt to get an access line speed. An access line speed was provided unprompted

in 43% of shops (see Figure 2a). At a total level, 3% of shops did not get an access line speed as the customer's line was not recognised by the ISP's database, while 3% were told that the access line speed checker was temporarily unavailable and 9% for other or no reasons (see Figure 3).

Figure 2a: Access line speed provided via telephone contact with ISP



Source: Q11 During the call, were you told what your Access line Speed would be?

Base: Total (1066), Plusnet (139), TalkTalk (127), BT (127), Orange (132), Other(181), O2(133), Sky (119), Virgin DSL (101)

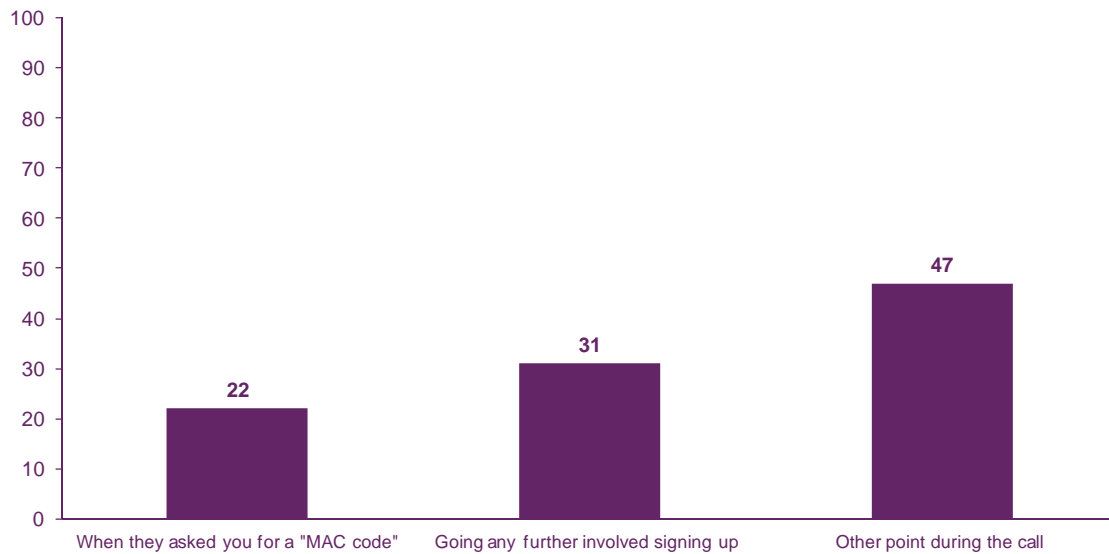
An unprompted access line speed was an estimate provided before being requested for a MAC code, bank details or at any other point when the mystery shopper felt the sale was close to completion (see figure 2b).

- 31% of those who prompted stated they prompted for an access line speed as going any further would involve 'signing up' for a broadband package
- 22% of shoppers stated they prompted for an access line speed when they were asked for a MAC code

In part, the results in Figure 2a are explained by the fact that in some cases ISPs asked for bank details or a MAC code early on in the sales process. There were also a number of statistically significant differences between ISPs (see Figure 2c) indicating that some ISPs were more likely than others to ask for a MAC code or for other information (such as bank details) committing consumers to sign-up early in the sales process. Ofcom intends to address this issue, and further details of its proposed actions are set out in the policy report⁴ which was published alongside the mystery shopping research report in March.

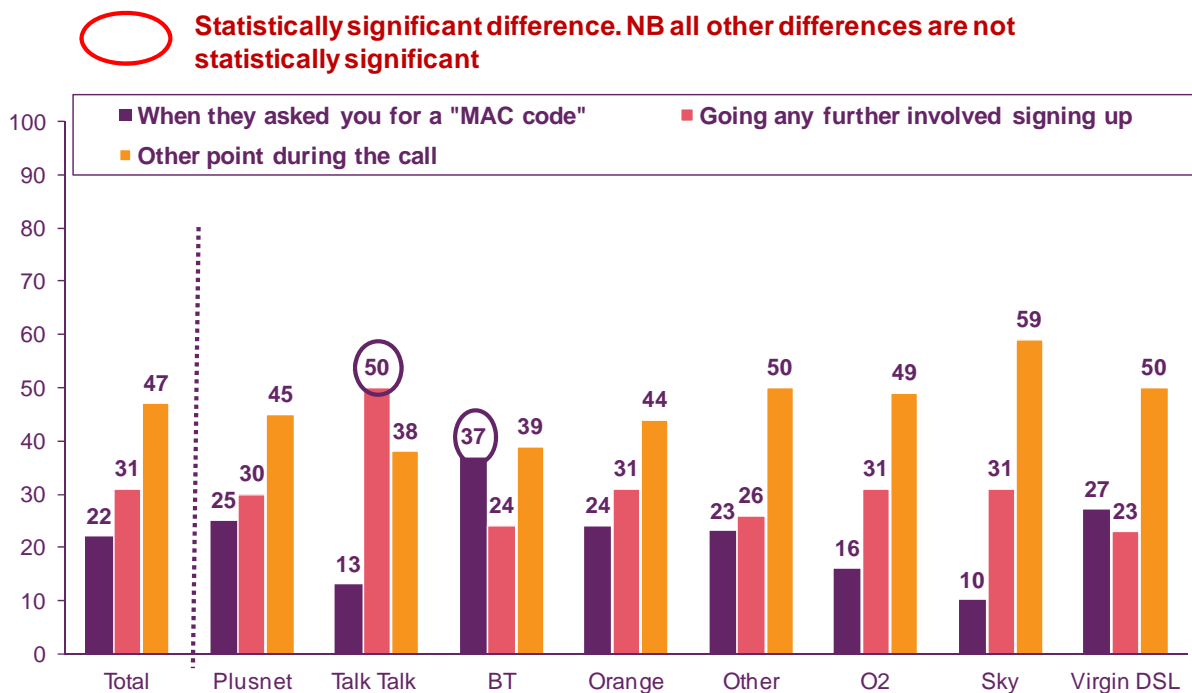
⁴ http://www.ofcom.org.uk/telecoms/ioi/copbb/voluntary_code_copbb/Mystery_shopping_report.pdf

Figure 2b: Most common point at which prompted by mystery shopper by ISP Telephone Shop (%)



Source: Q12 At what point during the call did you ask for your Access line Speed? Base: All those who had to prompt for an access line speed (611)

Figure 2c: Most common point at which prompted by mystery shopper by ISP Telephone Shop (%)

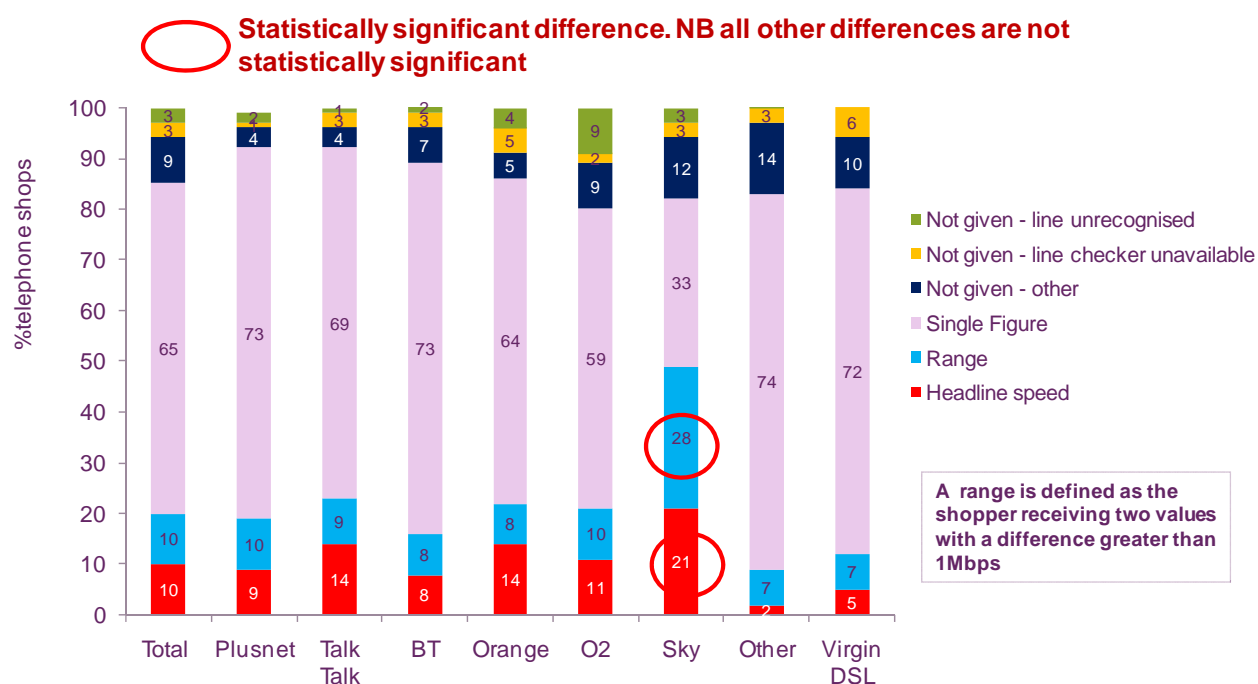


Source: Q12 At what point during the call did you ask for your Access line Speed? Base: All those who had to prompt for an access line speed (611) BT (92), O2 (61), Orange (70), Plusnet (76), Sky (81), TalkTalk (72), Virgin (48)*, Other (111)
*WARNING SMALL BASE SIZE

4.2.2 Provision of an access line speed estimate via telephone contact with ISP

As stated, 15% of shops in total failed to get an access line speed during the telephone shop. 10% of shops were given an access line speed which matched the Headline Speed⁵. A further 10% were given a range⁶ of access line speeds (see Figure 3). There were few statistically significant differences between ISPs. ISPs who were more likely to provide access line speed estimates in the form of a range told us that they sometimes provide a range because they believe that the line checkers used to estimate speeds are not necessarily accurate, and hence customers are given a more realistic expectation of their speed by being given a range rather than a single point estimate which is likely to be wrong. Ofcom is considering this further as they assess what changes should be made to the current version of the Code.

Figure 3: Provision of an access line speed estimate via telephone shop



Source: Q11 During the call, were you told what your Access line Speed would be?

Base: Total (1066), Plusnet (139), TalkTalk (127), BT (127), Orange (132), Other(181), O2(133), Sky (119), Virgin DSL (101)

4.2.3 Provision of an Access line speed estimate via ISP website

21% of shops failed to get an access line speed from the ISP website. A further 8% of shops were given the headline speed⁷, and 5% of shops were given a range⁸. Overall, a single point access line speed (that was not the headline speed) was provided to 66% of shops (see Figure 4). Shoppers were significantly more likely to receive an access line speed through an ISP's website if they were required to provide a postcode as well as a telephone number.

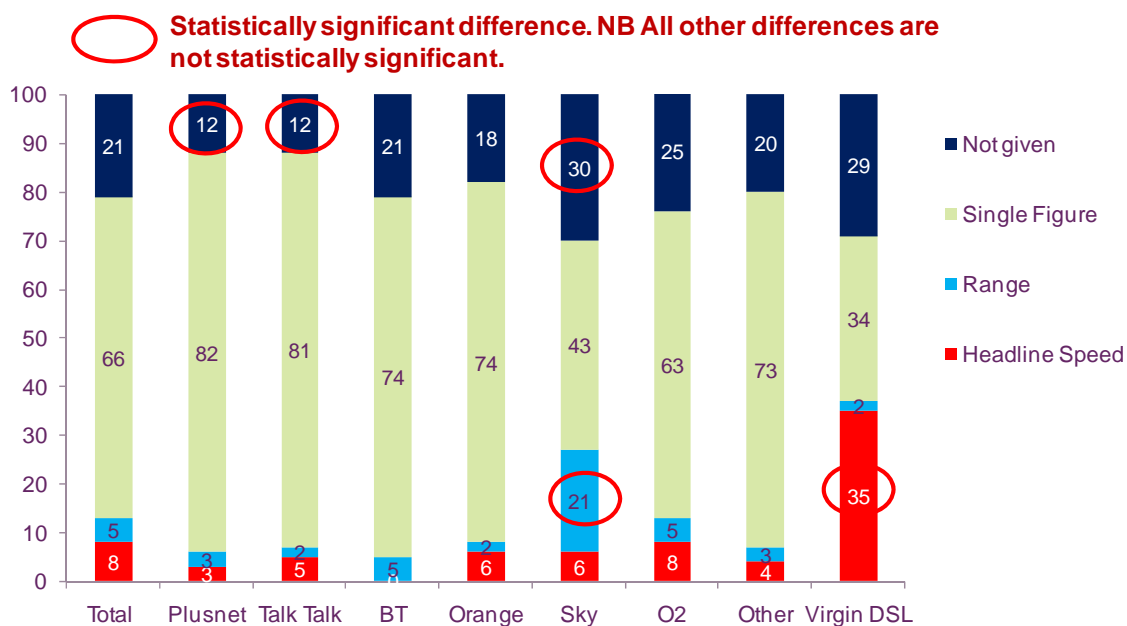
⁵ A headline speed is defined as a speed advertised by an ISP.

⁶ A range is defined as the shopper receiving two values with a difference of greater than 1Mbit/s.

⁷ A headline speed is defined as a speed advertised by an ISP

⁸ A range is defined as the shopper receiving two values with a difference of greater than 1Mbit/s.

Figure 4: Access line speed provided via ISP website (%)



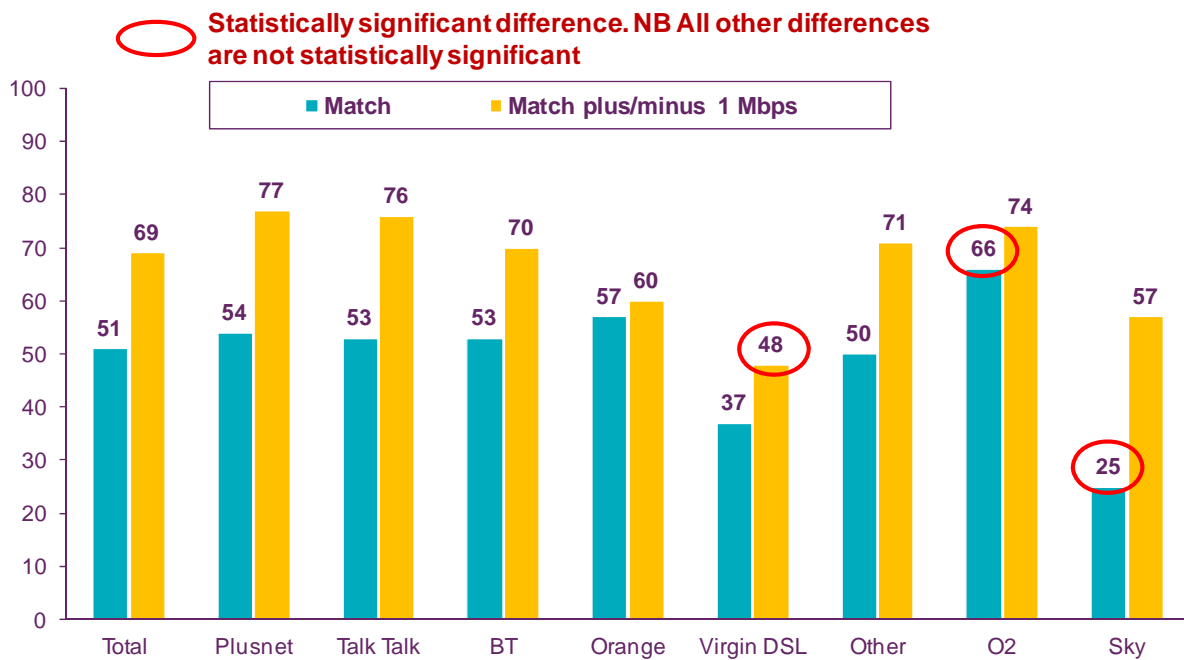
Source: Q5 When you checked the website of your ISP, were you able to find what your access line speed would be?
 Base: Total ISP Web Shops (1036), Plusnet (139), Talk Talk (127), BT (127), Orange (132), Other (151), O2 (133), Sky (126), Virgin (101)

4.3 Consistency of access line speed provided via telephone shops and ISP website

The estimates of access line speed provided by the telephone shop exactly matched that provided by the ISP's website in half (51%) of the comparisons. The estimates of access line speed matched by +/- 1 Mbit/s in 69% of comparisons (see Figure 5).

Where the telephone and online access line speed estimates did not match, there is no overall tendency for one estimate to be higher or lower than the other. The access line speed estimate provided on the telephone shops was higher (by more than 1 Mbit/s) than that provided in the online shops in 18% of comparisons. It was lower than in the online shops in 13% of comparisons. Again, the results indicate that there is a need to ensure that ISPs give consistent line checker information across different sales channels.

Figure 5: Consistency of access line speed provided via telephone shops and ISP website (where access line speed provided in both telephone and online shops) (%)

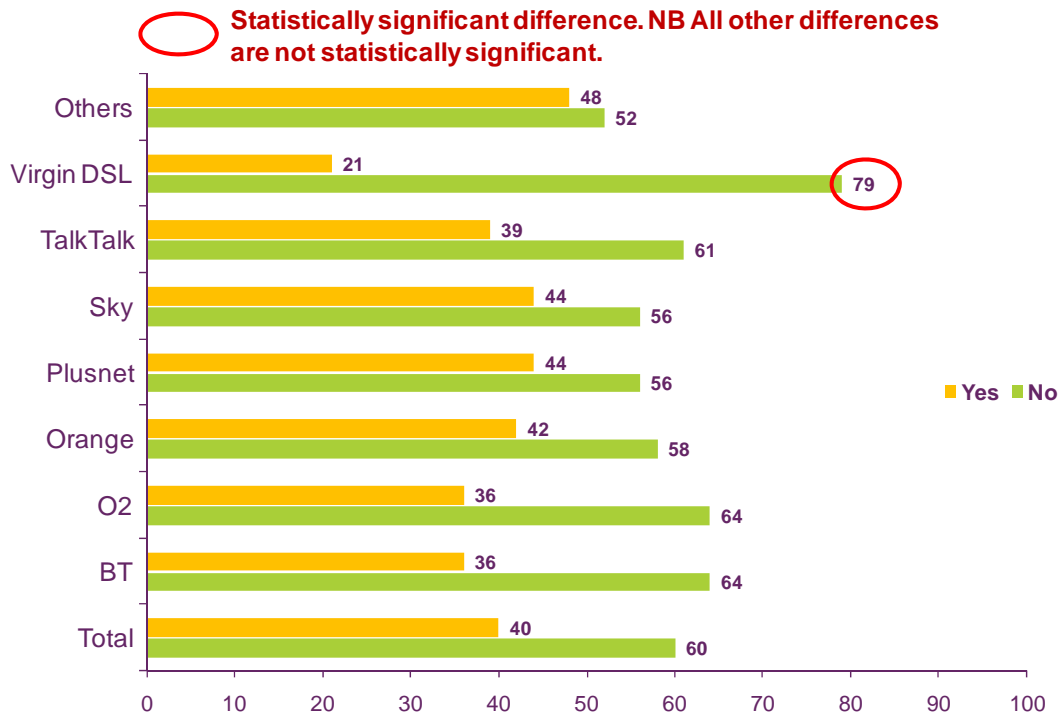


Source: Q7 Please record the result for your Access line Speed the Internet Service Provider website provided you with for your home. Q14 What Access line Speed were you told you could get?
 Base: Total (753), Plusnet (114), Talk Talk (108), BT (94), Orange (99), Virgin DSL (111), Other (91), O2(91), Sky (71),

4.4 Explanations of access line speed by ISP telephone customer agents

Overall, ISP customer agents explained that the access line speed was only an estimate in 48% of telephone shops (see Figure 6).

Figure 6: Whether ISP customer agents explained that the access line speed is an estimated speed (%)



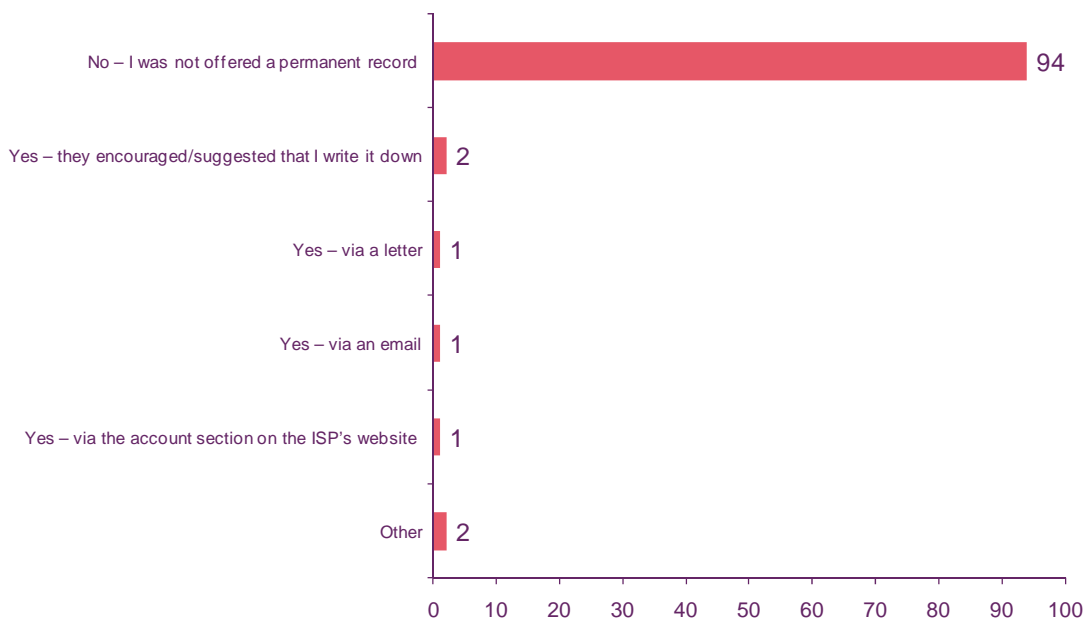
Source: Q15 Was it made clear to you that the Access line Speed they provided is only an estimate and that the actual speed you get once your broadband line is activated could be different?

Base: All those who receive an Access Line Speed Total (908), BT (112), O2 (107), Orange (113), Plusnet (129), Sky* (96), Talk Talk (117), Virgin* (85), Other (149) *WARNING SMALL BASE SIZE

4.5 Provision of durable record of access line speed

A record of access line speed – or a prompt by the ISP customer agents to make a record of this – was provided in 6% of telephone mystery shops. In 2% of shops this was specifically offered within a letter or email (see Figure 7).

Figure 7: Whether offered a record of access line speed by ISP customer agent (%)



Source: Q16 Were you offered a permanent record of your estimated access line speed?

Base: All those who receive an access line speed Total (908)

4.6 Information on actual speed versus access line speed

4.6.1 Explanation that actual speed is likely to be lower than access line speed

Overall, ISP customer agents explained that the actual speed was likely to be lower than their access line speed in 26% of telephone shops (see Figure 8). There were no statistically significant differences between ISPs.

Figure 8: Whether ISP customer agents explained that the customer's actual speed is likely to be lower than their access line speed (%)



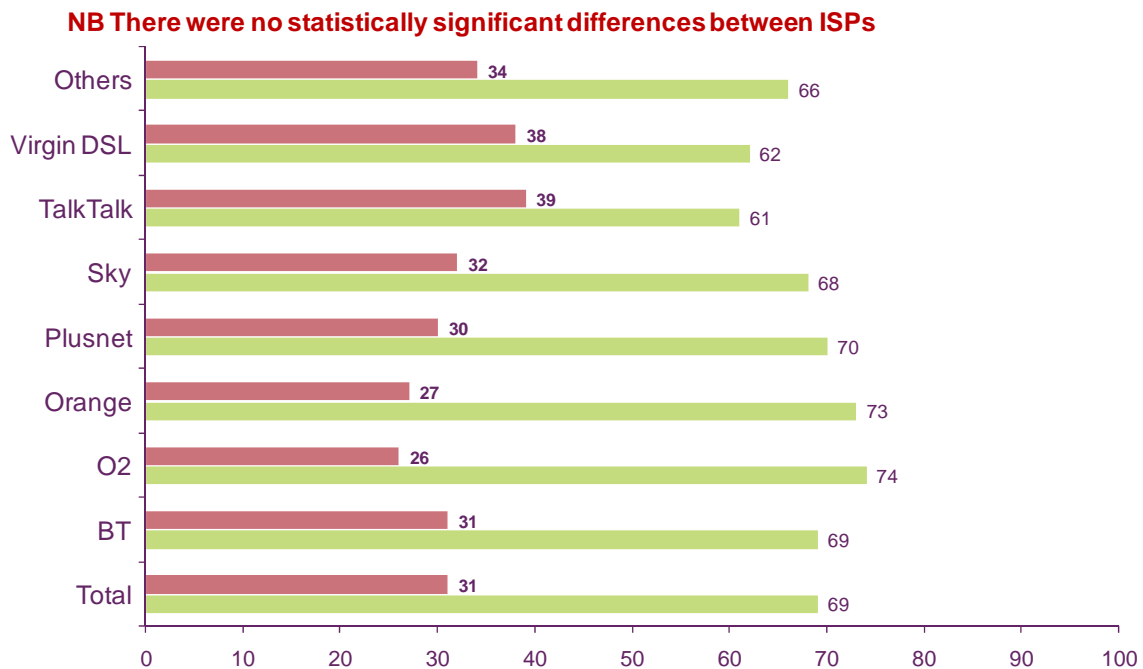
Source: Q17A Were you told that your Actual Speed would probably be lower than your Access Line Speed?

Base: Total (1116), BT (127), O2 (133), Orange (132), Plusnet (139), Sky (126), Talk Talk (127), Virgin (151), Other (181)

4.6.2 Explanation that actual speed is dependent on a number of factors

Overall, ISP customer agents explained that the actual line speed was dependent on a number of factors in 31% of shops (see Figure 9). There were no statistically significant differences between ISPs.

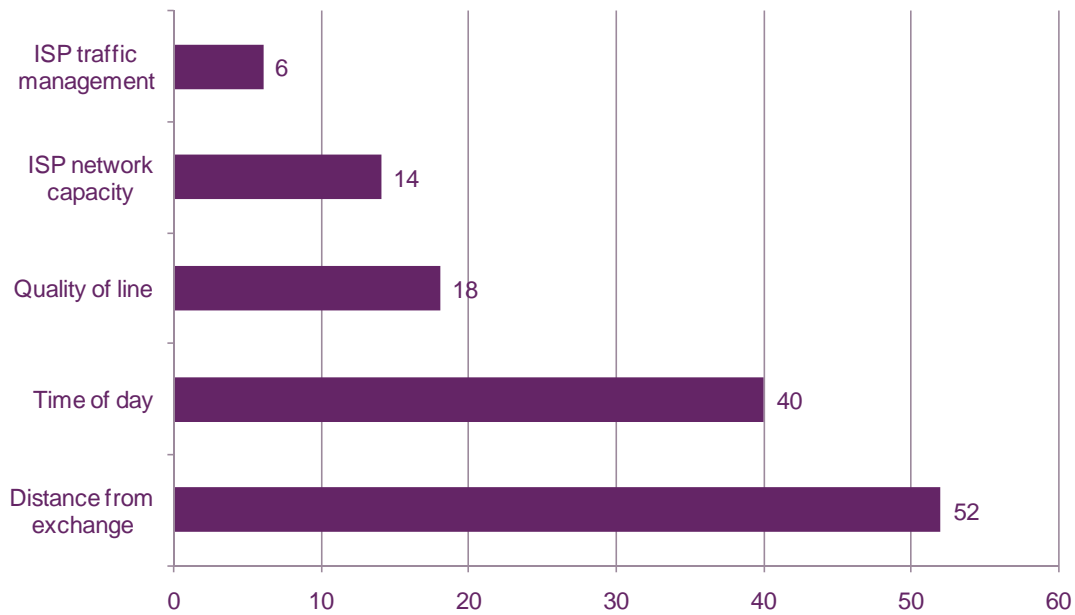
Figure 9: Whether ISP customer agents explained that the Actual Line Speed is dependent on a number of factors (%)



Source: Q17b And were you told that your Actual Speed would be dependent on a number of different factors? Base: Total (1116), BT (127), O2 (133), Orange (132), Plusnet (139), Sky (126), Talk Talk (127), Virgin (151), Other (181)

Where ISP customer agents gave explanations of factors that influence actual line speed, the 'distance from telephone exchange' and 'time of day' were most likely to be mentioned (by 52% and 40% respectively where explanation of factors was given). Fewer mentioned 'quality of the telephone line' (18%), 'ISP's network capacity (14%) or 'ISP's traffic management policy' (6%) - (see Figure 10). It should be noted that some ISPs have suggested to us that they do not apply traffic management to their networks, and hence there is no need for those ISPs to explain their relevant policy.

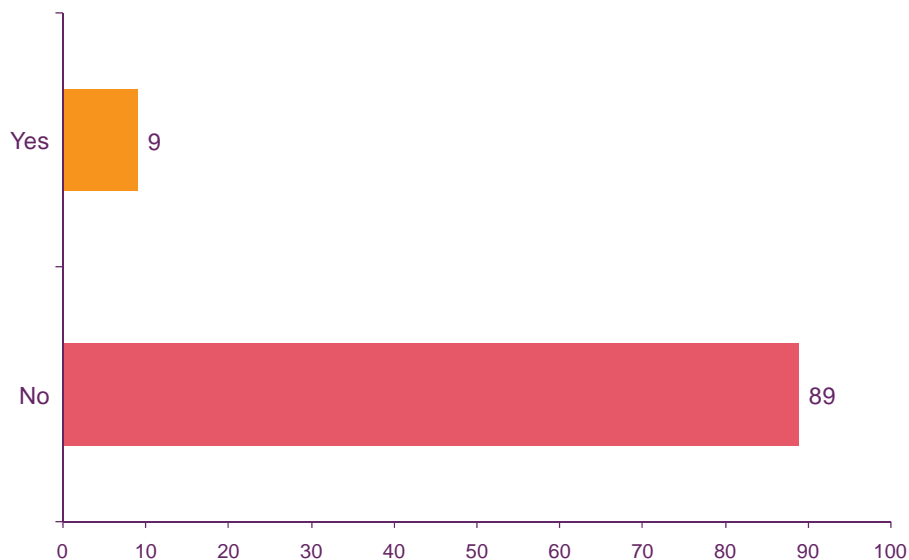
Figure 10: Whether ISP customer agents explained that the actual speed is dependent on a number of specific factors (%)



Source: Q20 Which of the following factors, if any, were you told could affect your Actual Speed? Base: All those told that Actual Speed would be dependent on a number of different factors (302)

ISP customer agents specified the times of day when actual speeds were likely to be lower for only 9% of telephone mystery shops (see Figure 11).

Figure 11: Whether ISP customer agents specified the times of day that actual speed is likely to be lower or network is likely to be congested (%)



Source: Q21 Were you told which times of day the network was most likely to be congested (i.e. when the network was being shared with a large number of users and you would tend to receive lower speeds)? Base: Total (1116)

Section 5

Adherence to the 3rd Principle: Accuracy of information on access line speed

5.1 Overview

The 3rd Principle requires that information initially provided to consumers by ISPs at the point of sale remains as accurate as possible.

In order to test whether the estimates provided are accurate, it would have been necessary to obtain the access line speeds of each of the mystery shoppers, however only commonly available online self tests were feasible for this exercise. As it is difficult to definitively test accuracy directly, we assessed whether ISPs were providing estimates in line with the ones provided by BT Wholesale line checker⁹ and with actual speeds as measured by a BBC iPlayer speed test¹⁰ performed on their PC outside peak hours. Although there are many different speed checkers available, we decided to use the BBC iPlayer speed test because we considered it both reliable and relatively simple for our mystery shoppers to use. It should also be noted that the BT Wholesale line checker is not necessarily any more accurate than the line checkers used by individual ISPs – but it did provide a common benchmark for us to assess the consistency of the estimates provided by different ISPs.

ISPs generally do not provide access line speed estimates that are consistent with the estimate of access line speed provided by the BT Wholesale line checker. There were also differences between the access line speed estimate and the actual speeds as measured by the BBC iPlayer speed test. Moreover, the estimates provided by different ISPs for the same line tended to vary from each other in many cases.

- 43% of access line speed estimates match (within +/-1 Mbit/s) the speeds as measured by BT Wholesale line checker.
- 22% of access line speed estimates match (within +/-1 Mbit/s) the actual speed estimates provided by the BBC iPlayer speed test.
- Where comparisons were able to be made, 38% of access line speed estimates were higher than those estimated by the BT Wholesale line checker by more than 1Mbit/s, and 66% were higher than the actual speeds estimates provided by the BBC iPlayer speed test more than 1Mbit/s.
- The differences between estimates were larger for mystery shoppers on ADSL2+ lines, than for those on ADSL Max lines. ADSL2+ estimates tend to show a wider range and larger difference when compared against both BT and iPlayer speed tests than ADSL Max estimates.

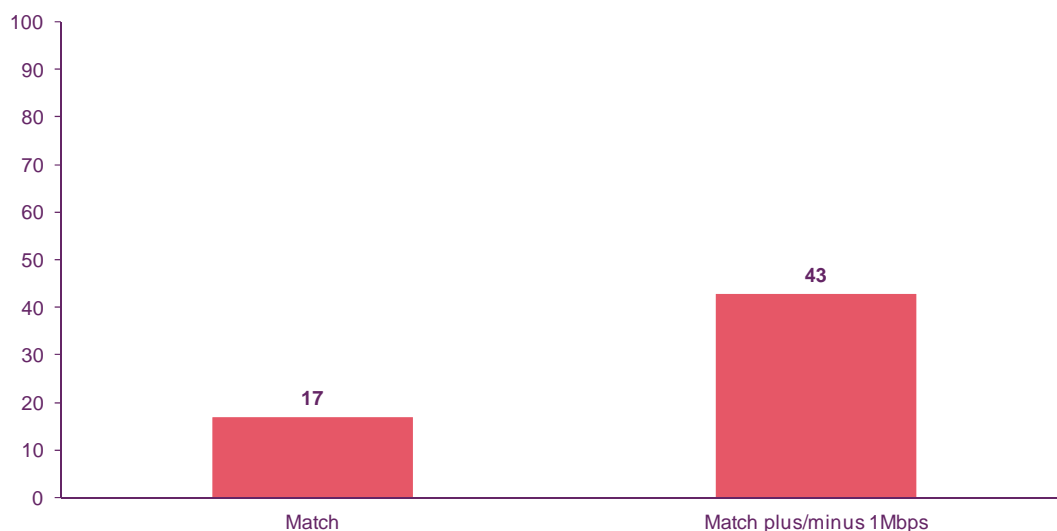
⁹ <http://www.dslchecker.bt.com/adsl/adslchecker.welcome>

¹⁰ <http://www.bbc.co.uk/iplayer/diagnostics>

5.2 Consistency of access line speed provided via telephone shops and BT Wholesale line checker estimate

The estimates of access line speed provided by the telephone shop matched that measured by the BT Wholesale line checker in 17% of comparisons (the BT Wholesale line checker was used as a common comparator rather than because it was necessarily more accurate). The estimates of access line speed matched by +/- 1 Mbit/s in 43% of comparisons (see *Figure 12*).

Figure 12: Consistency of access line speed provided via telephone shops and BT Wholesale line checker estimate (%)



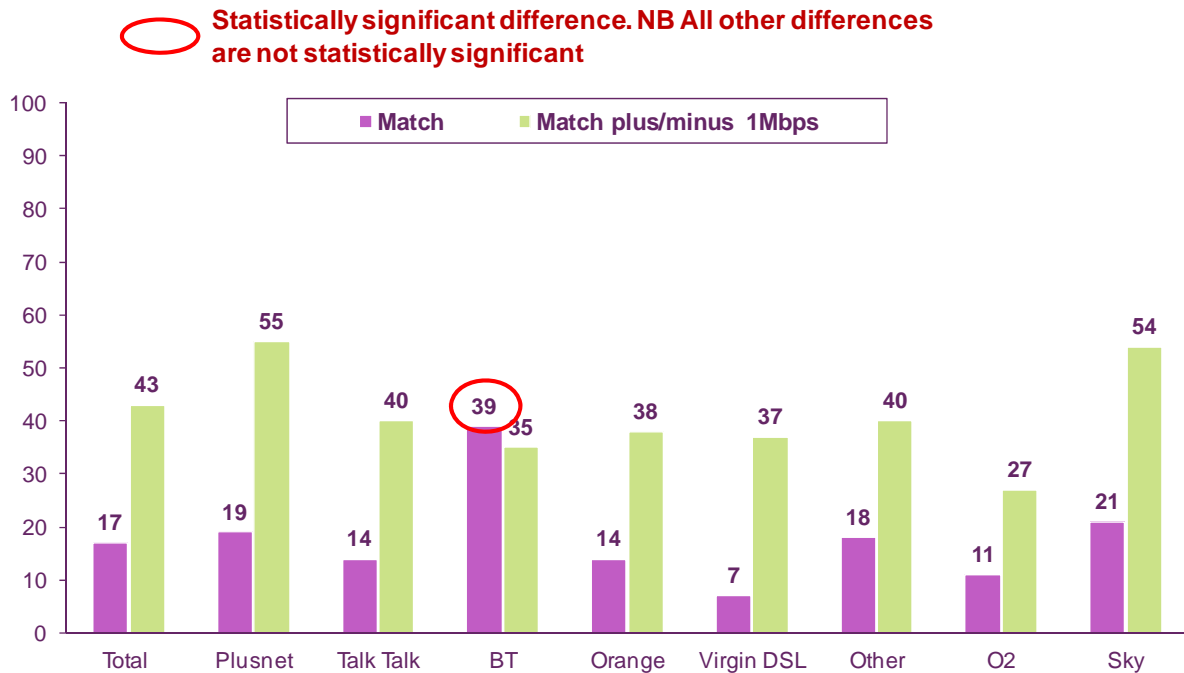
Source: Q14 What Access line Speed were you told you could get?

Base: Total (812)

There was significantly greater variability between ISPs' line checkers and the BT Wholesale line checker in relation to ADSL2+ services than there was in relation to ADSL1 services. In the case of ADSL2+ services the estimates provided by ISPs exceeded the BT Wholesale line checker estimate by more than +/- 1Mbit/s in 42% of shops, but this was only true in 26% of shops for ADSL1 services. Where differences occurred between ISPs' individual line checkers and the BT Wholesale line checker it is an indication of the fact that different ISPs use different methods of calculating and presenting access line speeds. Further details of Ofcom's proposed actions to address this issue and to ensure that consumers are given accurate and consistent information on access line speeds, are set out in the policy report¹¹ which we published alongside the mystery shopping research report in March.

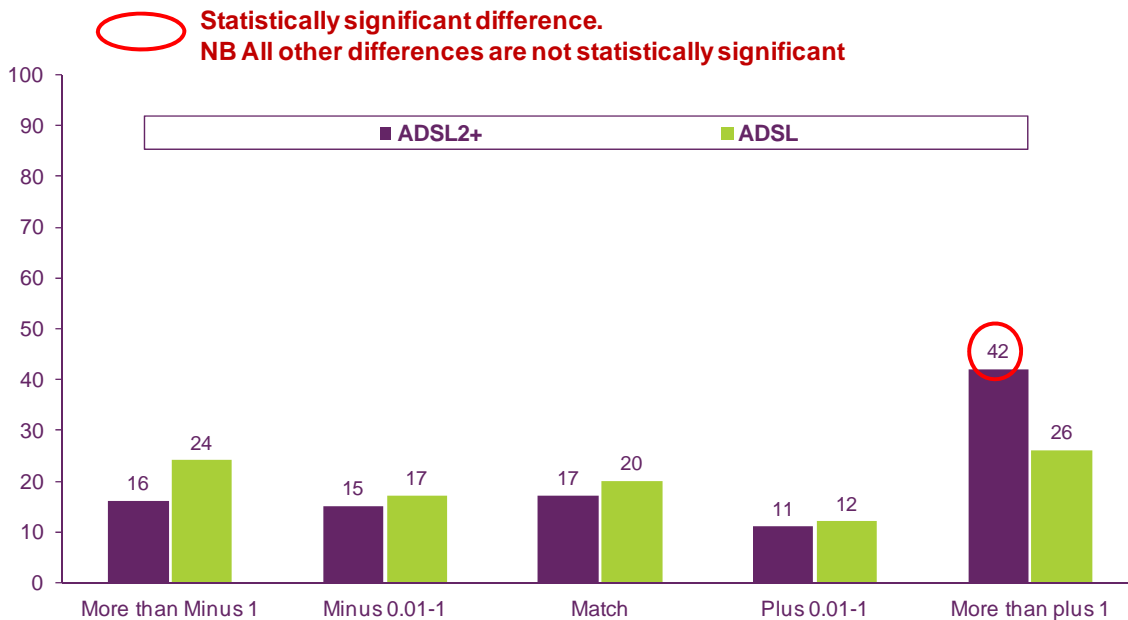
¹¹ http://www.ofcom.org.uk/telecoms/ioi/copbb/voluntary_code_copbb/Mystery_shopping_report.pdf

Figure 12a: Consistency of access line speed provided via telephone shops and BT Wholesale line checker estimate (%)



Source: Q14 What Access line Speed were you told you could get? Base: Total (812), Plusnet (118), Talk Talk (101) BT (103), Orange (96), Virgin (81), Other(143), O2(94), Sky *(42) * WARNING SMALL BASE SIZES

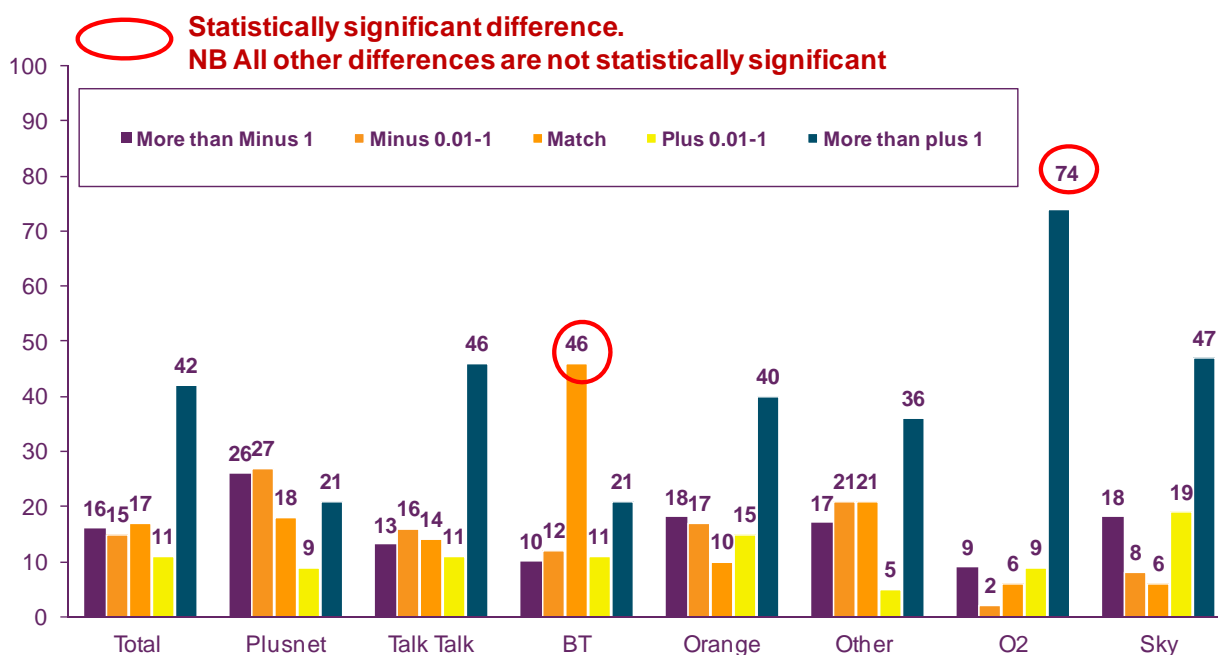
Figure 12b: Differences between ADSL1 and ADSL2+ for access line speed estimates provided via telephone shops and BT Wholesale line checker (%)



Source: Q14 What Access line Speed were you told you could get? Calculated by ISP telephone shop access line speed estimate minus BT Wholesale line checker estimate
Base: ADSL2+ (512), ADSL1 (280)

There were few statistically significant differences between ISPs when the access line speed estimates provided were compared with those from the BT Wholesale line checker. Where differences occurred however is an indication of the fact that different ISPs use different methods of calculating and presenting access line speeds. Further details of Ofcom's proposed actions to address this issue and to ensure that consumers are given accurate and consistent information on access line speeds, are set out in the policy report¹² which we published alongside the mystery shopping research report in March.

Figure 12c: Differences for ADSL2+ services between access line speed estimates provided via telephone shops and BT Wholesale line checker (%)



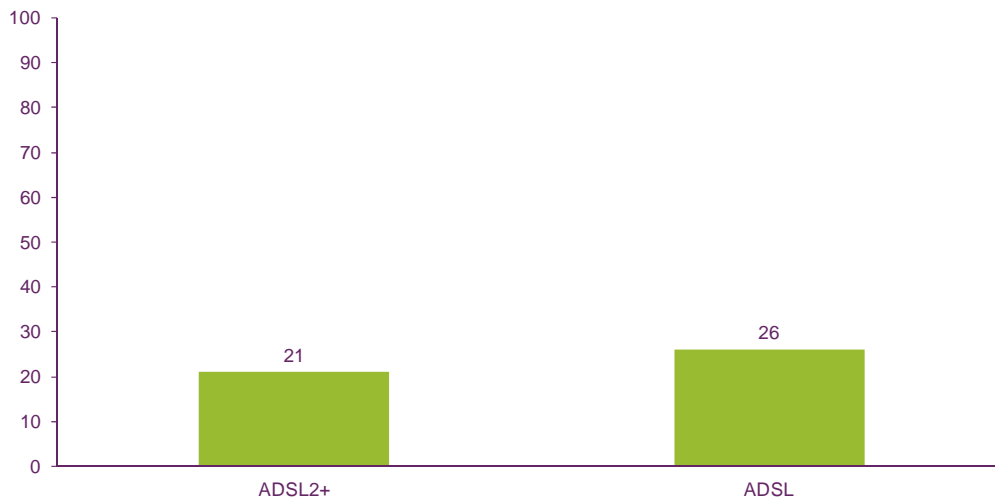
Source: Q14 What Access line Speed were you told you could get? Base: Total (512), Plusnet (78), Talk Talk (72), BT (68) Orange (60), Others (76), O2 (65), Sky * (26), * WARNING SMALL BASE SIZES

5.3. Consistency of access line speed provided via telephone shops and actual speeds

Actual speeds are often below access line speed estimates due to a range of factors, such as network congestion, PC or modem configuration and the number of computers connected. Nevertheless, we found that in more than 1 in 5 cases the access line speed estimate provided matched the actual speed on the mystery shopper's current broadband line (within +/-1 Mbit/s), and that there was no statistically significant differences in this regard between ADSL and ADSL2+ services.

¹² http://www.ofcom.org.uk/telecoms/loi/copbb/voluntary_code_copbb/Mystery_shopping_report.pdf

Figure 12d: Match within 1Mbit/s between access line speed estimate and current actual speed (%)



Source: Q14 What Access line Speed were you told you could get?

Calculated by ISP telephone shop access line speed minus BBC iPlayer speed test
Base: Total (784)

Section 6

Adherence to the 1st Principle: Training

6.1 Overview

The 1st Principle states that 'ISPs must use their best endeavours to procure that all of their representatives (including all of their officers and employees and any agents or sub-contractors) involved in selling or promoting their broadband services are trained appropriately and that they have sufficient understanding of the products and services they are promoting and selling.'

ISPs could do significantly more to improve perceptions of their knowledge and helpfulness.

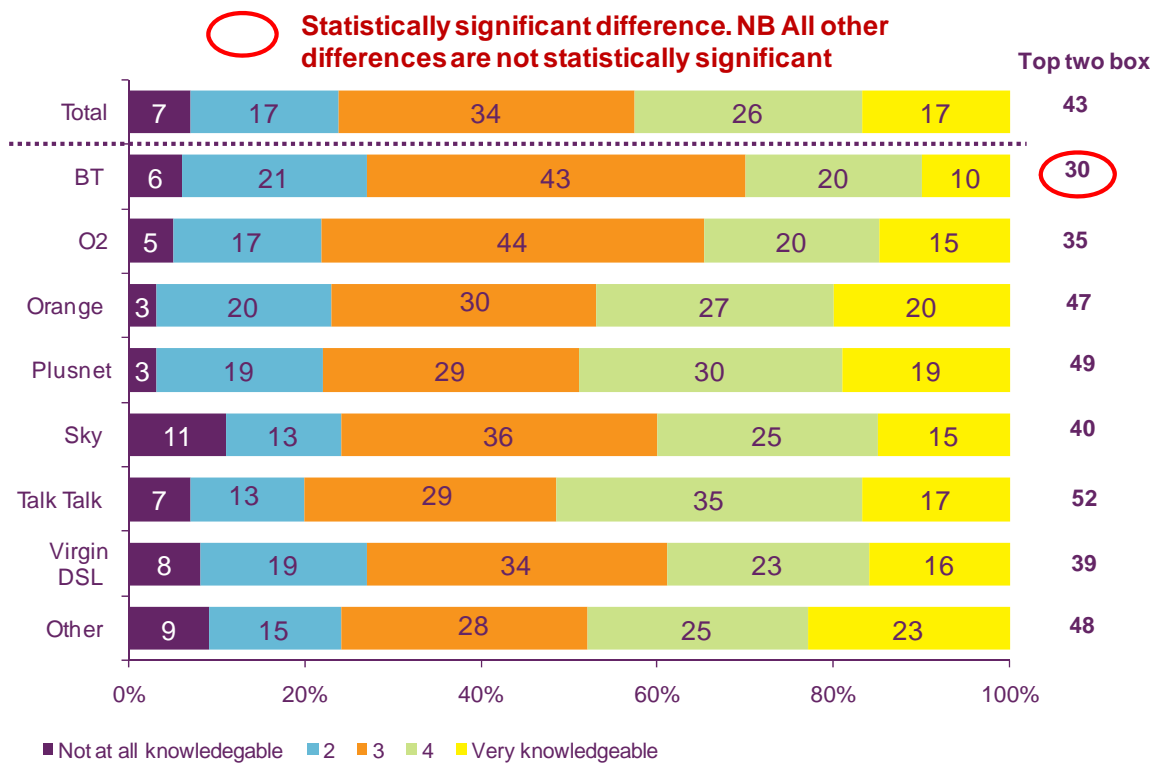
- ISP customer agents were perceived as being 'knowledgeable' in 43% of telephone mystery shops.
- ISP customer agents were perceived as being 'helpful' in 48% of telephone mystery shops.
- On average, customer agents were not clear in explaining to mystery shoppers that the actual speed they might experience is likely to be lower than the estimated access line speed. They were perceived as being 'clear' about this issue in 28% of shops. They were perceived as being generally 'not clear' for 53% of shops.

6.2 Evaluations of knowledge and helpfulness of ISP telephone customer agents

6.2.1 Perceptions of knowledge of ISP telephone customer agents

ISP customer agents were perceived as being 'knowledgeable' in 43% of telephone mystery shops. More specifically, customer agents were perceived as 'very knowledgeable' in 17% of shops (see *Figure 13*). Customer agents were perceived as being 'not at all knowledgeable' in 7% of telephone shops. Overall, customer agents were perceived to have low knowledge in 24% of shops. There were few statistically significant differences between ISPs.

Figure 13: Perceptions of knowledge of ISP customer agents – ISP Telephone Shop



Source: Q22b On a scale of 1-5 where 1 is "not at all" and 5 is "very", how knowledgeable do you feel the person/people you spoke to was?

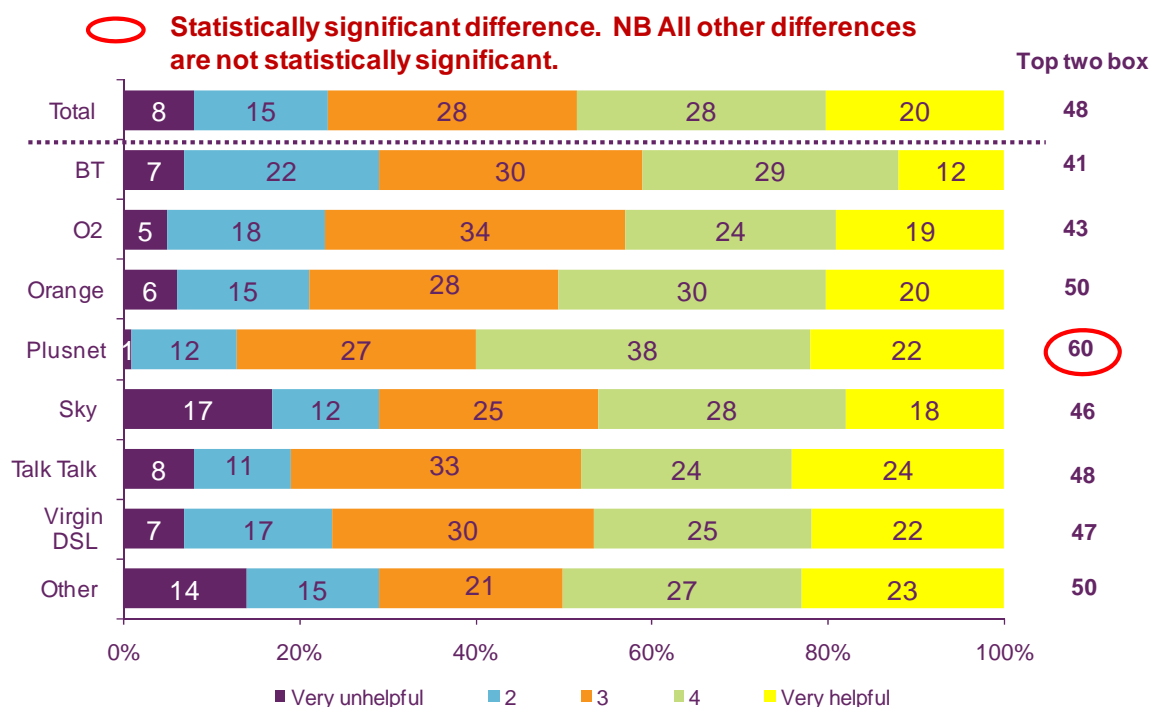
Base: Total (952), BT (100), O2 (111), Orange (110), Plusnet (115), Talk Talk (127), Virgin (126), Other (163), Sky (119)

6.2.2 Perceptions of helpfulness of ISP telephone customer agents

ISP customer agents were perceived as being 'helpful' in 48% of telephone mystery shops. More specifically, customer agents were perceived as 'very helpful' in 20% of shops (see Figure 14).

Customer agents were perceived as being 'very unhelpful' in 8% of telephone shops. Overall, customer agents were perceived to be generally 'unhelpful' in 23% of shops. There was only one statistically significant difference.

Figure 14: Perceptions of helpfulness of ISP customer agents - ISP Telephone Shop



Source: Q23 On a scale of 1-5 where 1 is "very unhelpful" and 5 is "very helpful", how helpful was the operator you spoke to in respect of finding out your Access line Speed?

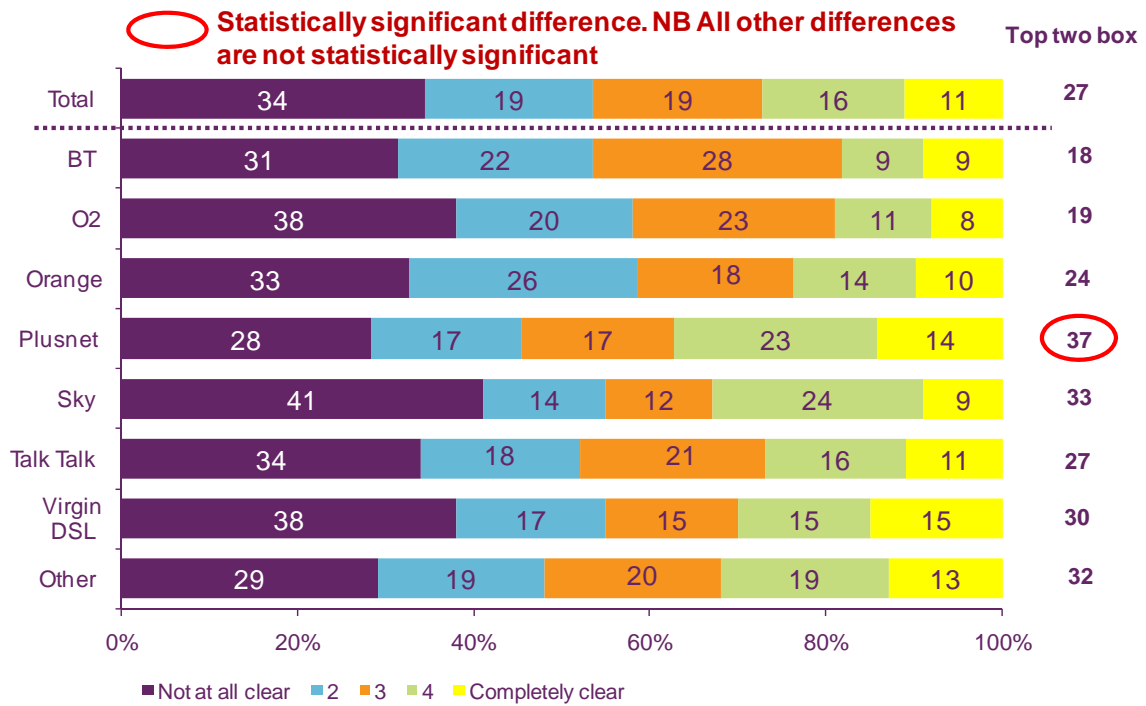
Base: Total (952), BT (100), O2 (111), Orange (110), Plusnet (115), Talk Talk (127), Virgin (126), Other (163) Sky (119)

6.3 Evaluation of explanations of access line speed by ISP telephone customer agents

On average, customer agents were not clear in explaining to mystery shoppers that the actual speed they might experience is likely to be lower than the estimated access line speed (see Figure 15).

Customer agents were perceived as being 'clear' about this issue in 28% of shops. They were perceived as being 'completely clear' in 11% of shops. Customer agents were perceived as being 'not at all clear' for a 34% of shops, and generally 'not clear' for 53% of shops. There was only one statistically significant difference.

Figure 15: Perceptions of clarity of explanation that Actual Speed is likely to be lower than Access line speed – ISP Telephone Shop



Source: Q22 On a scale of 1-5 where 1 is "not at all clear" and 5 is "completely clear", how clear was it that the Actual Speed you were likely to get would be lower than the Access line Speed you were told about?

Base: Total (952), BT (100), O2 (111), Orange (110), Plusnet (115), Talk Talk (127), Virgin (126), Other (163) Sky (119)

Section 7

Adherence to the 5th Principle: Presentation of broadband information on the website

7.1 Overview

The 5th Principle states that ISPs should aim to ensure that information related to fair usage policies, usage limits, traffic management and traffic shaping are clear and easily accessible to consumers. The large ISPs comply with the majority of the Code on their websites. However, there is scope for improvement.

- In many cases, information could be more prominent, clear and concise.
- The main area in which the larger ISPs do not comply with the Code is not mentioning the times of the day when the network is most likely to be congested.

7.2 Evaluation of presentation of broadband information on ISP websites

27 ISP websites (see *Appendix F for list of ISPs*) were evaluated to test their compliance with the Code. Compliance varied with 26 out of the 27 websites offering an access line speed checker but only 2 out of 27 encouraging consumers to record the access line speed provided (see Figure 16).

Figure 16: ISP Website Evaluation Results

Access Line Speed checker	26 out of 27
Access Line Speed emphasised	23 out of 27
Encouraged to record speed	2 out of 27
Speed stated as estimate	23 out of 27
Speed dependent on different factors	24 out of 27
Time of worst congestion stated	4 out of 27
Info on Fair Usage policy	21 out of 27
Info on breaching Fair Usage Policy	22 out of 27
Details on Actions ISP takes if Policy is breached	25 out of 27
Indication of whether ISP sends email notifications to customers who breach Fair Usage Policy	13 out of 27
Info on traffic management	13 out of 27
Link to Code of Practice	18 out of 27

7.2.1 Publishing of criteria for determining breaches of fair use policy

22 of the 27 ISP websites that were evaluated published information on the criteria they use for determining breaches of fair use policy. But there was variation between ISPs in how clear the information was perceived to be.

7.2.2 Publishing actions that would follow if a user exceeds usage limit or breaches fair use policy

25 of the 27 ISP websites evaluated published information on the actions they would take if a user exceeded a usage limit or breached a fair use policy.

7.2.3 Publishing of information related to email notification when a user exceeds a usage limit or breach a fair use policy

13 of the 27 ISP websites evaluated indicated that they send email notification when a user exceeds a usage limit or breach a fair use policy.

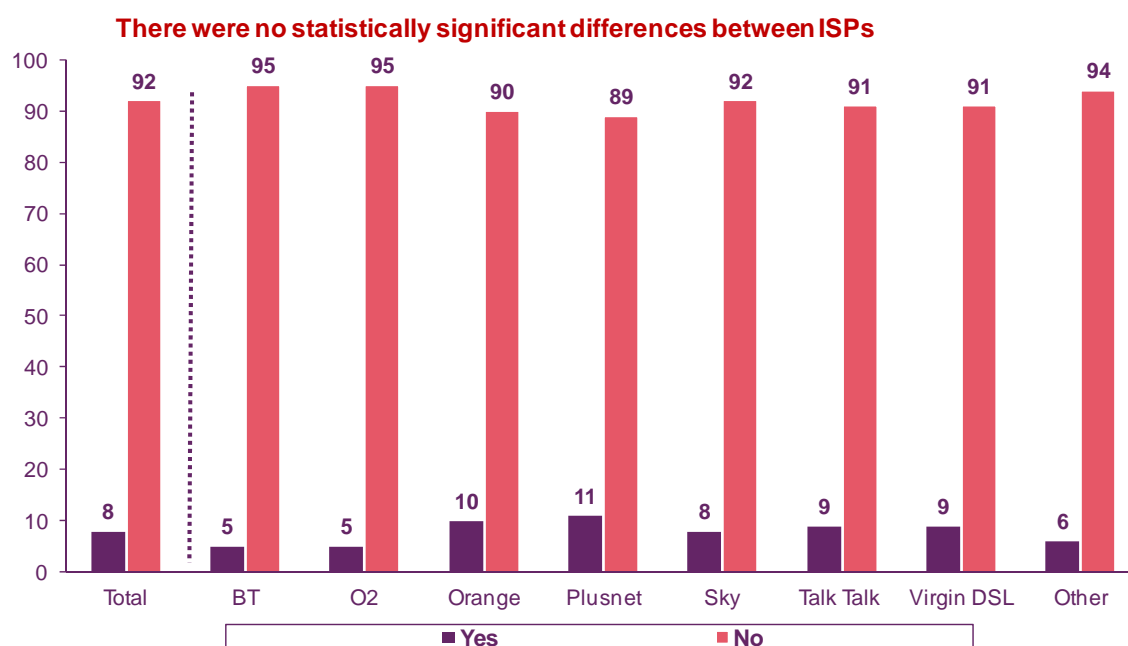
Section 8

Adherence to the 8th Principle: Consumers' awareness of ISPs' adoption of this Code

8.1 Overview

The 8th Principle states that ISPs should make reference to the Code within the sales process, and provide a full copy of the Code through an easily accessible link on their respective website. Overall, ISPs mentioned the Code in only 8% of telephone mystery shops (see Figure 17). There were no statistically significant differences between ISPs.

Figure 17: Whether ISP customer agents made reference to the Code during telephone shop (%)



Source: Q24 Were you told about the operator's code of practice (was it mentioned at any point during the call)?
Base: Total (1116), BT (127), O2 (133), Orange (132), Plusnet (139), Sky (116), Talk Talk (127), Virgin (151), Other (181)

Annexes

Annex A – Ofcom Voluntary Code of Practice: Broadband Speeds¹³

The Spirit of the Code of Practice

1. Ofcom's principal duty under the Communications Act 2003 is, in carrying out its statutory functions, to further the interests of citizens in relation to communications matters and to further the interests of consumers in relevant markets, where appropriate by promoting competition, by having regard, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money. Ofcom is particularly required to secure the availability throughout the United Kingdom of a wide range of electronic communications services.

2. Ofcom is further to have regard, in all cases, to the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles appearing to Ofcom to represent the best regulatory practice. Ofcom is also to have regard to, where it appears to it to be relevant in the circumstances, among other things:

- a. the desirability of promoting and facilitating the development and use of effective forms of self-regulation;
- b. the desirability of encouraging the availability and use of high speed data transfer services throughout the UK;
- c. the opinions of consumers in relevant markets and of members of the public generally.

3. Indeed, this reflects Ofcom's regulatory principles¹⁴, those being of particular relevance to this Code of Practice (the "Code") are:

- a. Ofcom will operate with a bias against intervention, but with a willingness to intervene firmly, promptly and effectively where required;
- b. Ofcom will strive to ensure its interventions will be evidence-based, proportionate, consistent, accountable and transparent in both deliberation and outcome;
- c. Ofcom will always seek the least intrusive regulatory mechanisms to achieve its policy objectives.

4. In light of the above, Ofcom believes that it is appropriate to introduce the Code as a voluntary and self-regulatory measure. Whilst recognising that speed is not the only criterion on which consumers base their broadband purchasing decisions, the objective of the Code is to increase the overall standard of information on broadband speeds – and other relevant metrics – that should be made available to consumers to help them make more informed choices of service products offered in the broadband market. This is because broadband speeds are a particularly complex area for consumers taking into consideration, for example,

¹³ <http://www.ofcom.org.uk/telecoms/ioi/copbb/copbb/>

¹⁴ <http://www.ofcom.org.uk/about/sdrp/>

different technologies and access routes used by businesses providing customers with connection to the internet (i.e. internet service providers or “ISPs”).

5. The Code is, however, part of a wider piece of work which Ofcom is currently undertaking in this area. For that reason, Ofcom has included certain requirements in the Code concerning systems developments, process changes and further research. In the meantime, Ofcom considers it appropriate to publish the Code due to the consumer benefit the Code is expected to deliver in relation to broadband speeds alone.

6. In addition, Ofcom will continue to monitor people’s experiences with matters covered by the Code and we may intervene with formal regulation at any stage if this self-regulatory form does not appear, in Ofcom’s opinion, to satisfactorily resolve these issues or Ofcom otherwise becomes of the view that there is need to so intervene more promptly or effectively.

7. The spirit of this Code, the voluntary will and commitment by the ISPs to making this self-regulation work, not just to the letter, is an essential element to its success.

8. Therefore, in honouring not only the letter but the full spirit of this Code, words, terms or provisions should not be so narrowly interpreted so as to compromise the ISPs’ commitments. Specifically, ISPs should use common sense in abiding by and interpreting this Code. In other words, Ofcom believes that the overall test should be whether, in the circumstances of each case, the ISPs are working within the spirit of this Code and are also making every reasonable effort to comply. Their fullest co-operation with Ofcom also forms part of the spirit of this Code in action.

9. Specifically, Ofcom has sought to capture the ISPs’ commitments under eight principles within the Code. Those commitments are not seeking to duplicate requirements under legislation or regulatory requirements imposed by Ofcom; they are also without prejudice to compliance with such requirements.

Introduction

10. Currently, 57% of UK households have a broadband connection¹⁵. The trend is expected to continue upwards with broadband serving a growing range of informational, practical and communication needs. The take up of services is encouraging and Ofcom is keen to make sure this trend continues.

11. As consumer demand for bandwidth-hungry applications increases, there has been a noticeable trend for some ISPs to advertise their products based on faster and faster Headline Speeds. However, the evidence reviewed to date by Ofcom suggests that these speeds are rarely achievable by the consumers that buy them. This is caused by a number of factors, including the nature of the customer’s line, the capacity of ISPs’ networks, the number of subscribers sharing the network, and the number of people accessing a particular website.

12. This disparity between actual and Headline Speeds advertised has led to some consumers feeling confused. With consumers’ dependence on higher broadband speeds

¹⁵ The Nations & Regions Communications Market 2008, Ofcom, May 2008

likely to rise, it becomes increasingly important to remedy this mismatch in their expectations.

13. Ofcom believes that there are steps that ISPs can take to improve the information provided to consumers both before they sign up to a service and after they have had the opportunity to use the service. Ofcom has therefore introduced the Code to encourage ISPs to provide consumers with more information on the speeds they can expect to obtain from their broadband service. In particular, the Code encourages the ISPs to provide consumers with information on their access line speed¹⁶ and to help ensure that consumers choose the package that is the most appropriate for each of them in light of their individual circumstances and needs. Ofcom is also working hard to find a means by which this information can be supplemented by additional information, including on the average throughput speeds obtained through different ISPs, since these speeds are likely to vary for a number of reasons. If appropriate, the Code will be revised as a result of such further work.

14. Ofcom will encourage ISPs who have not yet signed the Code to do so or to adopt the same or similar measures, and we will work with all ISPs to increase the overall standard of information offered to consumers so that they can make informed choices in the broadband market.

Definitions of Speed

15. It is useful to distinguish between different definitions of speed that are used in the Code.

- a. **headline** or advertised speed - This is the speed that ISPs use to describe the packages that they offer to consumers. They are often described as 'up to' speeds but these are often only a guide as to the speed an ISP can provide and at what price.
- b. **access line speed** - This refers to the maximum speed of the data connection between the broadband modem and the local exchange or cable head end. This constitutes the maximum speed a consumer will be able to experience.
- c. **actual** throughput speed - This is the actual speed that a consumer experiences at a particular time when they are connected to the internet. This figure is often dependent on factors such as the ISP's network, its traffic shaping and management policy, the number of subscribers sharing the network at the same time and the number of people accessing a particular website.
- d. **average** throughput speed – This is an average of actual throughput speed for each different broadband product offered by an ISP.

Applicability of this Code

16. The Code applies to all fixed line access broadband ISPs who sign up to the Code (the "signatories"). A list of the signatories is kept on Ofcom's website (www.ofcom.org.uk) and will be updated by Ofcom from time to time. The Code does not apply to dedicated business products intended primarily for use by business customers. However, all residential products

¹⁶ Access line speed refers to the maximum speed of the data connection between the broadband modem and the local exchange or cable headend.

(which are used, in some cases by small businesses) will be covered under the scope of the Code.

17. Whilst the current code is focused on fixed line broadband access, consumers of mobile broadband may equally benefit from similar measures since they too may not, in practice, be able to achieve headline or advertised speeds. Ofcom will be urgently seeking to engage with the mobile operators to consider whether to include mobile broadband in the code or alternatively to develop a separate code, or if other measures are needed.

18. Ofcom also notes that some of the principles of the Code are not relevant to all technologies used in supplying fixed line access broadband services. For example, on cable networks, the access line speed is expected to be consistent with the headline or advertised speed. Whilst some of these measures place additional emphasis on access line speeds, it is critical that all ISPs explain to consumers¹⁷ that actual throughput speeds are likely to be lower than the headline or advertised speeds, regardless of the technology used. Other principles in the Code will apply to all ISPs, regardless of whether they use cable or DSL¹⁸ access line technology.

19. Information on access line speeds will benefit consumers because it will give them a better idea about the maximum speed possible on their specific line, since access line speeds depend closely on the particular technical characteristics of the line. In addition to having information on access line speeds, consumers would also benefit from having information about the average throughput speeds which each ISP achieves in practice. Throughput speeds are an important metric for consumers since this is the download speed which they actually obtain in practice whilst using the internet.

20. Different ISPs are likely to vary in their throughput speed performance as a result of a number of factors such as the level of investment in their network capacity. By having more information on ISPs' respective performance, consumers would be able to make a more informed choice between ISPs and would also have a much clearer idea about what speed they should expect in practice.

21. Ofcom's aim is to develop a methodology and process which is sufficiently robust to accurately assess ISPs' average throughput speed performance. To this end, Ofcom is undertaking a research programme to look at this issue in more detail and to assess the role that each of actual and average throughput speed measurements can play. Ofcom will consider revisions to the Code in the light of this research.

Development of this Code

22. The Code will be subject to review by Ofcom from time to time in consultation with the signatories and others, so that we can ensure it continues to serve the interests of citizens and consumers and so that any new developments within the consumer market place can be reflected within the Code if this is considered appropriate.

¹⁷ The expression "consumers" as used throughout the Code has the meaning given in section 405(5) of the Communications Act 2003.

¹⁸ DSL (or Digital Subscriber Line) means a family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary phone lines (also known as twisted copper pairs) into high speed digital lines.

1st Principle: Training

23. The ISPs must use their best endeavours to procure that all of their representatives (including all of their officers and employees and any agents or sub-contractors) involved in selling or promoting their broadband services are trained appropriately and that they have sufficient understanding of the products and services they are promoting and selling.

24. The ISPs' commitment in paragraph 23 above includes that they are satisfied that any related training process provides their representatives with sufficient preparation to implement the principles outlined below.

25. The ISPs' commitment in paragraph 23 above also includes their representatives' attention being fully drawn to this Code, including the philosophy and spirit of the Code as explained in the Preamble.

2nd Principle: Information at point of sale

26. It is an essential cornerstone of the Code that consumers can make informed decisions and choices about the type of service they are likely to receive upon and after entering into any service contracts with the ISPs.

27. To achieve this Principle in action, the ISPs must use their best endeavours to procure that all of their representatives (including all of their officers and employees and any agents or sub-contractors) take the following steps to ensure that accurate and meaningful information on broadband speeds is provided to all consumers before they enter into any agreement. Representatives should also ensure that consumers are aware that there is additional broadband information provided on their websites, including that referred to in the 5th Principle below.

For those ISPs using technologies such as DSL for which the access line speed can be lower than the Headline Speed:

- a. Provide all consumers within the sales process, with information on their estimated access line speed, regardless of whether this is conducted over the phone, in a retail shop or through the ISP's website.
- b. Provide a facility on their website so that consumers can find out, in a clear and easily accessible manner, what their estimated access line speed is. ISPs should ensure that access line speed information is given due prominence on the line checker speed results webpage (this is the page on which a consumer's access line speed estimate is generated following the input of a consumer's postcode and/or landline number). For example, ISPs should underline or embolden the estimated figure.
- c. Ensure that the access line speed information provided within the sales process is a single number rounded to the nearest Mbit/s (or ½ Mbit/s for speed estimates below 4 Mbit/s). The ISP should avoid providing the customer with a range such as e.g. 0 to 8 Mbit/s. The ISP should highlight that this line speed is only an estimate and explain which factors will influence actual line speed post-activation of the service, and if a

customer subsequently gets an access line speed which is below the initial estimate, this will not necessarily mean that there is a fault on the line.

- d. Ensure that consumers will only be able to complete an order online, over the phone or through a retail shop when it has been made clear to them what their estimated maximum access line speed is. In the exceptional circumstance of the line checker not being available, this condition will not apply for customers who expressly do not wish to have a speed estimate.
- e. Provide the customer with a durable record of the estimated access line speed given at point of sale. This could be achieved in several ways:
 - i. Through a letter or email to the customer;
 - ii. By putting the initial estimate number into the 'My Account' details accessible by the consumer through the portal and advising the customer that they can get the data through this mechanism; or
 - iii. Proactively encouraging the customer to make a permanent record of the estimate by printing off the relevant page on the screen or making of a note of it.

All ISPs should:

- f. Explain to the consumer in a clear and meaningful way that the actual throughput speed that a consumer receives is likely to be lower than the estimated access line speed and Headline Speed. ISPs should explain that the actual throughput speed experienced by a consumer will be influenced by a number of factors including the ISP's network capacity, the ISP's traffic shaping and management policy, the number of subscribers online at any one time, by time of day etc. ISPs should also indicate to consumers the times of day when the network is likely to be most congested.
- g. When there is suitably robust and meaningful information available from Ofcom's research programme, ISPs will also be expected to provide information on throughput speeds in addition to access speeds wherever they are set out in the Code.
- h. Not abuse the trust of vulnerable consumers or consumers that otherwise appear uninformed about their services or products e.g. those who are elderly or whose first language is not English.

3rd Principle: Accuracy of information on access line speed provided by ISPs

28. Another important principle of the Code is that the information initially provided by the ISPs to consumers remains as accurate as possible.

29. To achieve this Principle in action, the ISPs must use their best endeavours to implement the following measures to ensure that information is kept up to date and as close to consumers' experiences as possible. This Principle will only apply for technologies such as DSL where the access line speed can be lower than the Headline Speed.

- a. The ISPs should take all reasonable steps to ensure, where applicable, that line checker (access line speed) information provided at point of sale remains as accurate as possible and updated to reflect any changes to or new information on the line.
- b. Ofcom recognises that some estimates of access line speed provided to consumers by ISPs are dependent on third party wholesale providers. In the event that issues are raised about information from third parties that are used by ISPs to estimate speed, Ofcom will work with ISPs and the relevant wholesale providers to ensure that appropriate steps can be taken to address the accuracy of information.
- c. In order that Ofcom can have confidence in the accuracy of information provided to consumers, ISPs will work with Ofcom to verify the overall quality of this information. Ofcom will invite all ISPs to help develop a suitable methodology that can usefully assess the extent to which estimates given to consumers match the actual access line speed achieved.

4th Principle: Managing consumers' speed-related problems

30. ISPs should be prepared to manage customers' problems when they report that they are not receiving the speeds that they had expected to receive when they purchased the broadband service.

31. To achieve this Principle in action, the ISPs must ensure the following:

- a. Those ISPs using technologies such as DSL for which the access line speed can be lower than the Headline Speed should:
 - i. Have a robust process for identifying whether the problem relates to a slower than expected access line speed;
 - ii. Log the problem as a technical fault if diagnostics indicate that this is appropriate;
 - iii. If it appears from the diagnostics that the problem is likely to have resulted from factors within the customer's control, e.g. internal wiring, the ISP should advise the customer of that fact and how such problems could be eased;
 - iv. If, after following the procedures i, ii and iii above, the customer continues to receive an access line speed significantly lower than the estimate provided at point of sale the ISPs should offer the customer with an alternative broadband package. This measure only applies where the ISPs offer their subscribers a lower speed package than that originally signed up to. Consumers should not incur any change of package penalty in order to migrate onto a different broadband package under these circumstances other than those charges that would have applied had they signed up to that lower package in the first instance.
- b. All ISPs should:

- i. Have a robust process for identifying whether the cause of the speed related problem is within the ISPs control and, where it is not, to explain clearly to the customer the possible causes of the lower speeds and how such problems could be eased e.g. problems with in home wireless set up.
 - ii. Where the cause of the problem is within the ISPs control, to monitor the problem through to resolution or until reasonable remedial actions are exhausted or the customer is satisfied with the outcome.
- c. Ensure that these processes are clearly highlighted on a prominent position on the ISP's website or in the introduction/starter pack that typically accompanies a consumer's provision of service.

5th Principle: Presentation of broadband information on the website

32. The purpose of this Principle is to supplement and, where appropriate, extend the 2nd Principle of the Code.

33. ISPs must use their best endeavours to set out clearly, and in a prominent place on their websites (e.g. within help or FAQs sections), information relating to their respective policies on fair usage; traffic management and traffic shaping to cover, at a minimum, the matters set out below.

Fair usage policies and usage limits

34. The ISPs should publish, in a clear and easily accessible form, any criteria they use for determining breaches of its fair usage policy (e.g. total usage, specific percentage of users etc).

35. The ISPs should publish, in clear and easily accessible form, the actions they intend to take should a user exceed a usage limit or breach a fair usage policy (e.g. the size of any extra charges or nature of any speed restrictions etc).

36. Where it is reasonably possible to do so, ISPs should provide a means by which users can measure their usage over the relevant billing period.

37. ISPs in possession of a user's email address should provide users with email notification when users exceed a usage limit or breach a fair usage policy which informs users about the precise consequences of doing so, e.g. additional costs, information on speed restrictions imposed etc.

38. The ISPs should also consider providing advance notification to subscribers approaching a usage limit.

Traffic management and traffic shaping

39. Where ISPs apply traffic management and shaping policies, they should publish on their website, in a clear and easily accessible form, information on the restrictions applied. This should include the types of applications, services and protocols that are affected and specific information on peak traffic periods.

6th Principle: Timescales

40. The introduction of the Code (including the measures covered by above-mentioned Principles of the Code) recognises the need to take swift measures to ensure that consumers can begin to benefit from it as quickly as possible.

41 To achieve this Principle in action, the signatories must use their best endeavours to implement the measures within 6 months of signing up to the Code.

7th Principle: Monitoring of compliance with this Code

42. The Preamble to the Code explains that the ISPs' fullest co-operation with Ofcom also forms part of the spirit of the Code in action. This commitment includes the ISPs providing Ofcom with appropriate written information as to their compliance with this Code on Ofcom's request and by no later than the reasonable deadlines for responses as set by Ofcom from time to time.

43. Ofcom also intends to monitor compliance with the Code through a number of methods including, but not limited to, carrying out regular mystery shopping exercises by Ofcom itself or its agents.

8th Principle: Consumers' awareness of ISPs' adoption of this Code

44. The ISPs must make reference to the Code within the sales process and provide a full copy of the Code through an easily accessible link on their respective website.

Annex B - Methodology

A quantitative mystery shopping approach was used, covering both website and telephone sales routes. The multi-stage process was conducted as follows:

Executive evaluations of website compliance	Website evaluations of each ISP's compliance with the Code of Practice.
Mystery Shopper evaluations of sales process	Shoppers visit BT Wholesale line checker and record ASDL2 and ASDL MAX access line speed.
	Visit ISP website to check and record maximum access line speed.
	Telephone call to ISP to switch from current broadband provider.
	Continue as far down sales route as possible until one of four possible outcomes.
	<i>a) Provided with access line speed</i> Outcome recorded, mystery shop ended.
	<i>b) Asked for MAC code</i> Outcome recorded, mystery shop ended.
	<i>c) Asked for bank details</i> Shopper asks for access line speed before terminating call, outcome recorded, mystery shop ended.
	<i>d) Other</i> Shopper asks for access line speed before terminating call, outcome recorded, mystery shop ended.
Mystery Shopper evaluations of speed	Each shopper provided their average speed from BBC iPlayer diagnostics check.

A total of 1,289 shops were conducted across all actively trading (residential) code signatories. Shops were conducted between 30th October and 30th November 2009, across England, Scotland and Wales.

Mystery shops were conducted by a panel of 175 mystery shoppers, recruited to the specifications below.

- All with home broadband internet access.
- All able to find their maximum broadband (ADSL 2 or ADSL Max) access speed using their telephone or postcode at: <http://www.dslchecker.bt.com/adsl/adslchecker.welcome>

- All who had not taken part in any other broadband mystery shopping or tried to change supplier in the last 6 months
- No more than 25 mystery shoppers currently receiving broadband services from one of: BT; O2; Orange; Plusnet; Sky; TalkTalk; Virgin.
- Minimum 75 mystery shoppers to have Sky television.

Annex C – Evaluation questionnaires

C.1 Mystery shopping evaluation questionnaire

Section 1: General Information

Q1 Interviewer name
Interviewer telephone number
Interviewer postcode
Interviewer identification number

Q2 Which of the following is your current home Internet Service Provider
Please select one

AAISP	1
Aquiss	2
Be broadband	3
Beaming	4
BT	5
Demon	6
Eclipse	7
Fast	8
Firefly	9
Firenet	10
Freedom to surf	11
Greenbee	12
ID net	13
Karoo	14
MacAce	15

Madasafish	16
Namesco	17
Newnet	18
Nildram	19
O2 home	20
Orange	21
Pipex homecall	22
Plusnet	23
Post Office	24
Rutland	25
SAQ	26
Sky	27
Surfanytime	28
Talk Talk	29
Timico	30
UK online	31
Virgin Media	32
Vivacity	33
Zen	34
Other (SPECIFY)	35

Section 2: Pre-shop task

PLEASE NOTE THAT YOU ONLY NEED TO DO THIS PRE-SHOP TASK THIS ONCE (BEFORE YOU CONDUCT ANY MYSTERY SHOPPING TASKS) BUT YOU NEED TO RECORD THIS INFORMATION AT THE START OF EACH INTERVIEW.

Q3

Prior to conducting the mystery shopping tasks you must visit the BT Line Checker website (refer to your briefing pack for details) to determine the maximum Access line Speed for your landline for ADSL2+ and ADSL Max using both your telephone number and postcode. In

some cases, you will only be able to get the ADSL Max estimate in which case please record that. Access line Speed is the MAXIMUM speed that you could get but the ISP might call it something else such as the "speed available on your line" or similar.

It is important that you check both your telephone number and postcode separately as different Access line Speeds are often provided depending on which information is used to check the speed.

Please indicate below what speed you received from these checks, ensuring that you write your answer with a decimal place if that is how it was provided e.g. if it was six point five write in 6.5. If less than 1 Mbit/s (E.G. 512 Kilobits per second) write in "0.512". If you did not receive a speed or only receive one out of ADSL2+ and ADSL Max, please record NOT AVAILABLE and any information provided as to why this information was not available).

Telephone number

ADSL2+ _____

ADSL Max _____

Postcode

ADSL2+ _____

ADSL Max _____

Q4 Please indicate which of the following Internet Service Providers this 'shop' refers to:

Please select one

- | | | |
|--------------|---|----------|
| AAISP | 1 | |
| Aquiss | 2 | Go to Q8 |
| Be broadband | 3 | |
| Beaming | 4 | Go to Q8 |
| BT | 5 | |

Demon	6	
Eclipse	7	
Fast	8	
Firefly	9	Go to Q8
Firenet	10	
Freedom to surf	11	
Greenbee	12	
ID net	13	
Karoo	14	
MacAce	15	
Madasafish	16	
Namesco	17	
Newnet	18	
Nildram	19	
O2 home	20	
Orange	21	
Pipex homecall	22	Go to Q8
Plusnet	23	
Postoffice	24	
Rutland	25	Go to Q8
SAQ	26	Go to Q8
Sky	27	
Surfanytime	28	
Talk Talk	29	
Timico	30	
UK online	31	
Virgin Media	32	
Vivaciti	33	Go to Q8
Zen	34	

ONLY ANSWER Q4A IF YOU SELECTED SKY AT Q4

Q4a Do you currently have Sky TV in your household (i.e. when you carried out a mystery shop for Sky Broadband you informed them you had Sky TV)?

Please select one

Yes

No

Section 3: Website 'shop'

This section refers to the information you received from the ISP (Internet Service Provider) website.

ONLY ANSWER Q4b IF YOU SELECTED VIRGIN MEDIA AT Q4

Q4b Please indicate whether you live in a fibre optic cable area or non fibre optic cable area

Please select one

I live in a fibre optic cable area

Go to Q8

I live in a non fibre optic cable area

Continue

Q5 When you checked the website of your Internet Service Provider (using the instructions provided in your briefing pack), were you able to find what your Access line Speed would be? Access line speed is the MAXIMUM speed that you could get. Note, the website probably won't call it the Access Speed – they might just say the "speed available on your line" or similar.

Please select one

Yes

1

No

2 Go to Q8

Q6 Please indicate what information you provided to receive your Access line Speed. Access line Speed is the MAXIMUM speed that you could get.

Please select all that apply

Postcode 1

Telephone number 2

Address 3

Q7 Please record the result for your Access line Speed the Internet Service Provider website provided you with for your home. Access line Speed is the MAXIMUM speed that you could get and it might just be called the “top speed available on your line”. Please ensure that you write your answer with a decimal place if that is how it was provided e.g. if it was six point five write in 6.5. If less than 1 MBPS (E.G. 512 Kilobits per second) write in "0.512". If they provide a range (E.G. “8 to 16 Mbit/s”) then please write down the full range they give you.

Section 4: Telephone Task

This section refers to the information you received from the Internet Service Provider telephone call centre.

Q8 Which day of the week did you call the Internet Service Provider?

Please select one

Monday 1

Tuesday 2

Wednesday 3

Thursday 4

Friday 5

Saturday 6

Sunday 7

Q9 At what time did you call the Internet Service Provider?

Please select one

- | | |
|------------------------|---|
| Before midday | 1 |
| Between midday and 6PM | 2 |
| After 6PM | 3 |

Q10 At the start of the call, what was the first piece of information the customer adviser asked you for after you told them you were interested in switching your broadband provider?

Please select one

- | | |
|--|----|
| Full address | 1 |
| Postcode only | 2 |
| Telephone number | 3 |
| Your name | 4 |
| Name of your current ISP | 5 |
| Details of your current ISP package | 6 |
| Mac Code for your current ISP | 7 |
| The broadband package you were interested in | 8 |
| The price you were willing to pay | 9 |
| The price you currently pay | 10 |
| Other (SPECIFY) | 11 |

IF ANSWERED 'I live in a fibre optic cable area' AT Q4B GO TO Q17

Q11 During the call, were you told what your Access line Speed would be? Access line Speed is the MAXIMUM speed that you could get. Note, the customer adviser probably won't call it the Access Speed – they might just say the "speed available on your line" or similar.

Please select one

Yes – without prompting	1	Go to Q14
Yes – only after prompting	2	Go to Q12, then skip to Q14
No – still not given after prompting	3	Go to Q12, Q13

Q12 At what point during the call did you ask for your Access line Speed? i.e. when did you ask “Can I just check what speed I will get?”

Please select one

- | | | |
|--|---|-------------------------------|
| When they asked you for a "MAC code" go to Q14 | 1 | Continue unless code 2 at Q11 |
| When going any further would have involved signing up to the service (i.e. they asked for payment details) go to Q14 | 2 | Continue unless code 2 at Q11 |
| Other point during the call (SPECIFY) go to Q14 | 3 | Continue unless code 2 at Q11 |
-

Q13 Were you informed that they couldn't provide your Access line Speed at that moment because the line checker was unavailable?

Please select one

- | | | |
|-----|---|------------|
| Yes | 1 | Go to Q17A |
| No | 2 | Go to Q17A |
-

Q14 What Access line Speed were you told you could get? Please ensure to write your answer with a decimal place if that is how it was provided e.g. if it was six point five write in 6.5. If less than 1 Mbit/s (E.G. 512 Kilobits per second) write in "0.512". If you were given a range please indicate the range.

Q15 Was it made clear to you that the Access line Speed they provided is only an estimate and that the actual speed you get once your broadband line is activated could be different? THIS IS INFORMATION THAT THE OPERATOR WOULD HAVE PROVIDED WITHOUT YOU ASKING ABOUT IT.

Please select one

Yes	1
No	2

Q16 Were you offered a permanent record of your estimated Access line Speed? Please answer even if they didn't tell you your speed there and then (e.g. did they offer to send it to you later?)

Please select all that apply

No – I was not offered a permanent record of my Access line Speed	1
Yes – via a letter	2
Yes – via an email	3
Yes – they encouraged/suggested that I write it down	4
Yes – via the account section on the ISP's website (e.g. they set me up with a user name so I could access detailed information about the service I had been enquiring about	5
Other (SPECIFY)	6

Q17a Were you told that your Actual Speed would probably be lower than your Access line Speed?

Yes	1
No	2

Q17b And were you told that your Actual Speed would be dependedent on a number of different factors?

Please select one

- | | | |
|-----|---|-----------|
| Yes | 1 | Go to Q20 |
| No | 2 | Go to Q21 |

Q20 Which of the following factors, if any, were you told could affect your Actual Speed?

Please select all that apply

- | | |
|---|---|
| The ISP's network capacity | 1 |
| The ISP's traffic and management policy | 2 |
| The number of people online at any one time | 3 |
| The time of day | 4 |
| The distance from telephone exchange | 5 |
| The quality of telephone line | 6 |
| Other (SPECIFY) | 7 |
| None of these | 8 |

Q21 Were you told which times of day the network was most likely to be congested (i.e. when the network was being shared with a large number of users and you would tend to receive lower speeds)?

Please select one

- | | |
|------------|---|
| Yes | 1 |
| No | 2 |
| Don't know | 3 |

Q22 On a scale of 1-5 where 1 is "not at all clear" and 5 is "completely clear", how clear was it that the Actual Speed you were likely to get would be lower than the Access line Speed you were told about? PLEASE ANSWER THIS QUESTION REGARDLESS OF WHETHER THE OPERATOR PROVIDED YOUR ACCESS line SPEED

Please select one

Not at all clear	1
2	2
3	3
4	4
Completely clear	5

Q22b On a scale of 1-5 where 1 is "not at all" and 5 is "very", how knowledgeable do you feel the person/people you spoke to was?

Please select one

1 - Not at all knowledgeable	1
2	2
3	3
4	4
5 - Very knowledgeable	5

Q23 On a scale of 1-5 where 1 is "very unhelpful" and 5 is "very helpful", how helpful was the operator you spoke to in respect of finding out your Access line Speed?
PLEASE ANSWER THIS QUESTION REGARDLESS OF WHETHER THE OPERATOR PROVIDED YOUR ACCESS line SPEED

Please select one

Very unhelpful	1
2	2
3	3
4	4
Very helpful	5

Q24 Were you told about the operator's Code of Practice (was it mentioned) at any point during the call?

Please select one

Yes 1

No 2

Q25 Record (precisely in minutes and seconds) how long the call took from the point at which the operator answered the phone to the point you put the phone down?

Q26 Please record any other details about the call that you feel would be relevant for us to know.

Annex D – Explanation of terminology

Range: A range is defined as the mystery shopper receiving a lower and upper access line speed with a variation of more than 1Mbit/s

Headline Speed: A headline speed is defined as the mystery shopper receiving an access line speed that matched the speed of one of the ISPs advertised broadband packages.

The following access line speed estimates were exempt from being classified as a headline speed:

- access line speed estimates of 2Mbit/s as this was deemed an acceptable estimate
- access line speed estimates of 8Mbit/s where the mystery shopper was provided with an ADSL2+ line speed from the BT Wholesale Line Checker

ISPs were given the benefit of the doubt in the cases where their lowest advertised package was provided as the access line speed. In those cases the access line speed was not allocated as being a Headline Speed.

Annex E – Quality procedures

The following procedures were carried out to ensure the accuracy of the results contained within this report:

- Access line speeds and BBC iPlayer speeds provided by Mystery Shoppers were sense checked to ensure the results provided were reliable. Any outliers were double checked and in a small number of cases removed from the results.
- Mystery shoppers must have provided an ADSL2+ or ADSL Max access line speed from the BT Wholesale Line Checker to partake in this research programme. These recorded ADSL2+ and ADSL Max access line speeds were then checked against the access line speeds provided by the ISP's to ensure the results provided by the Mystery Shoppers were reliable. Any access line speed estimations that were not feasible were removed from the results.
- ISP web shops that were allocated as providing a Headline Speed as the access line speed estimate were checked on the 26th February 2010 following review of the initial findings by ISPs. The results published reflect results at this date. Access line speed estimates for each mystery shopper were checked 3 weeks apart on the BT Wholesale Line Checker. This showed that 21% of ADSL2+ estimates changed and 40% of ADSL Max estimates changed within this 3 week period. The mean difference when this occurred was 0.5 to 1 Mbit/s, so comparisons were made within +/-1 Mbit/s to reflect this.

Annex F – ISPs evaluated

ISP	No of telephone mystery shops carried out	Website evaluation conducted
AAISP	5	Yes
Aquiss	4	No
Be broadband	7	Yes
Beaming	6	No
BT	152	Yes
Demon	22	Yes
Eclipse	8	Yes
Fast	5	Yes
Firefly	5	No
Firenet	5	Yes
Freedom to surf	5	Yes
Greenbee	5	Yes
ID net	5	Yes
Karoo	19	Yes
MacAce	6	Yes
Madasafish	5	Yes
Namesco	6	Yes
Newnet	6	Yes
Nildram	6	Yes
O2 home	158	Yes
Orange	158	Yes
Pipex homecall	4	No
Plusnet	163	Yes
Postoffice	20	Yes
Rutland	2	No
SAQ	5	No
Sky	151	Yes
Surfanytime	5	Yes
Talk Talk	152	Yes
Timico	5	Yes
UK online	6	Yes
Virgin Media	151	Yes
Vivaciti	6	No
Zen	21	Yes