

# Domestic Receiving Systems

## Set-top and Loft Aerial Usage

### Digital UK Technical Note

26<sup>th</sup> April 2012

#### SUMMARY

This note supplements the Digital UK Technical Note on set-top and loft aerial usage, dated 21<sup>st</sup> November 2011. It updates the usage figures and explains the sampling methodology used to obtain the figures.

The conclusion remains substantially unchanged: Internal aerials are used by around 18% of main receivers and 32% of secondary receivers, some 27% of the entire DTT receiver population.

#### TELEVISION RECEIVER POPULATION

##### 2011

##### Ofcom Research

Ofcom published updated estimates of the size of the UK television receiver population:

- 26.0m tv households
- 60m tv receivers
- 19m DTT homes
- 10.1m DTT-only homes
- 10.1m DTT primary receivers
- 20.2m DTT secondary receivers
- 1.8m analogue-only homes
- 8.5m secondary analogue sets

*Source: Ofcom Digital TV Update Q1 2011, published 05/07/2011*

[http://stakeholders.ofcom.org.uk/binaries/research/tv-research/tv-data/dig-tv-updates/Q1\\_2011\\_DTV\\_Update.pdf](http://stakeholders.ofcom.org.uk/binaries/research/tv-research/tv-data/dig-tv-updates/Q1_2011_DTV_Update.pdf)

Freeview have since indicated that the BARB Q4 2011 Establishment Survey reassessed DTT penetration and determined that DTT usage has increased, such that there are now:

- 20m DTT homes
- 10.8m DTT-only homes
- 10.8m DTT primary receivers (in DTT-only homes)
- 9.2m DTT secondary receivers (in both DTT-only and pay-tv homes)

## CONSUMER RESEARCH

### **Switchover Tracker Survey**

Digital UK commissions the so-called “Switchover Tracker Survey” (the Tracker) to assess the switchover readiness of households in regions yet to switch. Digital UK also undertakes a single “dipstick” survey two weeks after switchover in each area to assess conversion rates. It is outside Digital UK’s remit to assess on going usage of DTT following switchover, so there is no information available on long-term reception trends in post-switchover areas.

Tracker respondents complete a 20 minute face-to-face interview. Fieldwork is carried out by GfK NOP. Interviewers speak to a representative sample of the population including more vulnerable parts of the population who are less likely to have converted their TV sets to digital already.

The questionnaire is designed to track the following four dimensions of readiness:

- Awareness
- Understanding
- Attitudes
- Conversion

The Tracker is conducted across all switchover regions or sub-regions until a region is fully switched. Sample sizes per region are boosted as a region gets closer to the start of switchover:

- 300 respondents per quarter in regions where switchover starts within the next 2.5 years.
- 200 responders per quarter and switchover project from 15 months out in regions that have a drawn out switchover timetable and have to be split into more than one project.
- The remaining regions are sampled in line with their proportion of the national population.
- Tracker monitoring stops after a project is fully switched.

Immediately before switchover starts, monitoring changes from continuous surveying on the Switchover Tracker to small intense bursts of interviewing before and after the event. These so called “dipstick surveys” include the same key metrics but also gather additional information, on people’s experiences with switching over and re-tuning equipment as well as a general review of the programme and the communications campaign.

The Switchover Tracker sample includes the full range of consumer groups, including those who may have some difficulty with switchover. This includes: older people, people with disabilities, those living in rural areas, minority ethnic groups (BAME), people living on their own and those living in different types of property e.g. rented accommodation (private or social housing), and in multiple-dwelling units.

### **Sampling methodology**

The Tracker uses standard demographic quotas to achieve a sample that is representative of the UK as a whole. As switchover projects drop off the Switchover Tracker after a region is fully switched, the Tracker results remain representative of all remaining switchover regions.

The selection of interview point uses a Random Location sample design, utilising census data and the current Postal Address file to generate street listings and quota sheets for interviewers. Postcode sectors are used to determine sample points within each ITV region.

The sample of 16+ adults is divided with quotas on age, gender and working status, to reflect the demographic profile of each ITV region. A quota of flats is also included in order to further ensure the representative nature of each sample point.

Interviews for each wave take place at addresses from those supplied (constituency name and sample number are recorded on each script in order to monitor quotas), with each wave of interviews spread evenly across four weeks of fieldwork.

To ensure consistency with trend data, the sample design is the same across all waves.

### **Post Survey Weighting**

National data is weighted to reflect the regions in their correct incidence (by age, gender and social class), ensuring that data from any one boosted region does not skew the national picture.

Given that the sample is controlled by quotas, the final demographic profile should be fairly close to that of the target population. However, the sample is examined post fieldwork to ensure that the profile is as it should be. The sample will, if necessary, be weighted in order to ensure that it is representative in terms of known population data on age, sex, social class, ITV region and regional digital TV platform availability.

Several different weighting factors are used depending on the particular population that is being investigated. Quotas and one set of weights are set at the individual level. Within face-to-face interviewing, it is given that the fewer people in the household, the less likely they are to be home and available to be interviewed. Therefore a household weighting factor (which in addition to matching the national profile also corrects for number of people in household) is used to achieve an accurate reading of household measures, such as number and type of televisions within the household.

The individual weighting profile is used for all flexible campaign driven measures like awareness of switchover or the Switchover Help Scheme and understanding the need to convert or all detailed campaign messages like understanding of the year, month or exact date when digital switchover starts in each region.

The household weighting profile is used for all TV ownership metrics, e.g. levels of digital TV conversion of the first to the fifth TV set in the home.

## **AERIALS**

The Tracker survey collects data about each television receiver in a home and, where DTT is in use for the main set, the questionnaire includes a specific question on the type of aerial connected to each receiver in the household:

*What type of aerial, if any, does the TV set in (insert room of house) use?*

1. *Roof Aerial*
2. *Loft Aerial*
3. *Indoor/set top aerial*
4. *Communal aerial system*
5. *No aerial attached*
6. *Don't know*

It is therefore possible to assess to what extent DTT reception is obtained through a set-top or loft aerial in the run-up to switchover. Analogue data is also collected, but the high level of digital take-up means that the sample sizes are too small to give meaningful data.

Note that data is not collected for secondary DTT sets in households where the main set is not used to receive DTT

The post-switchover dipstick survey seeks little information on aerials, but does pose the question:

*Did you have to get an aerial upgrade to convert your TV(s) to digital?*

- a) *New rooftop aerial*
- b) *New set-top aerial*

It is therefore not possible to determine whether the overall usage of set-top reception changes following switchover, but it is clear that set-top reception must be higher than the percentage requiring an upgraded set-top aerial to continue with DTT reception.

## RESULTS

Aerial data is only available for the regions yet to switch at the time of the Tracker survey.

The 21<sup>st</sup> November 2011 report referred to a Tracker survey taken in March/April 2011, which covered the London, Tyne Tees, Meridian and Ulster regions. Between them these regions represent 35% of UK households, and include both large urban and extensive rural areas, so they are a fair reflection of the likely national picture. However, since this survey relates only to pre-switchover analogue and DTT reception, the proportion of set-top and loft aerial usage is likely to be lower than would be expected for the high power post-switchover network. This is reflected particularly in the extremely low set-top aerial figures for Meridian, where pre-switchover transmitter powers are constrained, coverage is restricted and generally poor.

The full analysis is set out below:

| Region           | hh        | Main set   |    |                |    |             |    |                |    | Sample |
|------------------|-----------|------------|----|----------------|----|-------------|----|----------------|----|--------|
|                  |           | DTT in use |    | Set-top aerial |    | Loft aerial |    | Total internal |    |        |
|                  | hh        | hh         | %  | hh             | %  | hh          | %  | hh             | %  |        |
| London           | 4,858,000 | 1,748,880  | 36 | 174,888        | 10 | 192,377     | 11 | 367,265        | 21 | 104    |
| Tyne Tees        | 1,418,000 | 680,640    | 48 | 13,613         | 2  | 54,451      | 8  | 68,064         | 10 | 87     |
| Northern Ireland | 649,000   | 181,720    | 28 | 27,258         | 15 | 18,172      | 10 | 45,430         | 25 | 66     |
| Meridian East    | 745,000   | 305,450    | 41 | 9,164          | 3  | 33,600      | 11 | 42,763         | 14 | 68     |
| Meridian West    | 1,427,000 | 470,910    | 33 | 9,418          | 2  | 23,546      | 5  | 32,964         | 7  | 54     |
| Total            | 9,097,000 | 3,387,600  | 37 | 237,132        | 7  | 338,760     | 10 | 575,892        | 17 | 379    |

| Region           | hh        | Secondary set |    |                |    |             |    |                |    | Sample |
|------------------|-----------|---------------|----|----------------|----|-------------|----|----------------|----|--------|
|                  |           | DTT in use    |    | Set-top aerial |    | Loft aerial |    | Total internal |    |        |
|                  | hh        | hh            | %  | hh             | %  | hh          | %  | hh             | %  |        |
| London           | 4,858,000 | 1,943,200     | 40 | 680,120        | 35 | 291,480     | 15 | 971,600        | 50 | 122    |
| Tyne Tees        | 1,418,000 | 680,640       | 48 | 108,902        | 16 | 88,483      | 13 | 197,386        | 29 | 151    |
| Northern Ireland | 649,000   | 181,720       | 28 | 41,796         | 23 | 3,634       | 2  | 45,430         | 25 | 132    |
| Meridian East    | 745,000   | 208,600       | 28 | 22,946         | 11 | 45,892      | 22 | 68,838         | 33 | 103    |
| Meridian West    | 1,427,000 | 613,610       | 43 | 30,681         | 5  | 36,817      | 6  | 67,497         | 11 | 86     |
| Total            | 9,097,000 | 3,627,770     | 37 | 435,332        | 12 | 362,777     | 10 | 798,109        | 22 | 594    |

By way of comparison, Tracker data is also now available for January/February 2012, again covering the London, Tyne Tees, Meridian East and Ulster regions:

| Region           | hh        | Main set   |    |                |    |             |    |                |    | Sample |
|------------------|-----------|------------|----|----------------|----|-------------|----|----------------|----|--------|
|                  |           | DTT in use |    | Set-top aerial |    | Loft aerial |    | Total internal |    |        |
|                  | hh        | hh         | %  | hh             | %  | hh          | %  | hh             | %  |        |
| London           | 4,858,000 | 1,991,780  | 41 | 258,931        | 13 | 139,425     | 7  | 398,356        | 20 | 188    |
| Tyne Tees        | 1,418,000 | 652,280    | 46 | 6,523          | 1  | 97,842      | 15 | 104,365        | 16 | 77     |
| Northern Ireland | 649,000   | 194,700    | 30 | 19,470         | 10 | 11,682      | 6  | 31,152         | 16 | 59     |
| Meridian East    | 745,000   | 186,250    | 25 | 3,725          | 2  | 18,625      | 10 | 22,350         | 12 | 42     |
| Total            | 7,670,000 | 3,025,010  | 36 | 302,501        | 10 | 272,251     | 9  | 574,752        | 19 | 366    |

| Region           | hh        | Secondary set |    |                |    |             |    |                |    | Sample |
|------------------|-----------|---------------|----|----------------|----|-------------|----|----------------|----|--------|
|                  |           | DTT in use    |    | Set-top aerial |    | Loft aerial |    | Total internal |    |        |
|                  | hh        | hh            | %  | hh             | %  | hh          | %  | hh             | %  |        |
| London           | 4,858,000 | 2,137,520     | 44 | 513,005        | 24 | 320,628     | 15 | 833,633        | 39 | 257    |
| Tyne Tees        | 1,418,000 | 638,100       | 45 | 172,287        | 27 | 70,191      | 11 | 242,478        | 38 | 190    |
| Northern Ireland | 649,000   | 214,170       | 33 | 51,401         | 24 | 12,850      | 6  | 64,251         | 30 | 127    |
| Meridian East    | 745,000   | 245,850       | 33 | 17,210         | 7  | 22,127      | 9  | 39,336         | 16 | 64     |
| Total            | 7,670,000 | 3,235,640     | 39 | 744,197        | 23 | 420,633     | 13 | 1,164,830      | 36 | 638    |

It is clearly evident that there is statistical variation between the two surveys, probably in part due to the exclusion of Meridian West from the January/February 2012 data. In this area set-top and loft aerial usage was relatively low compared to the national picture which depressed the average results.

Comparing the two sets of data, we can derive a likely range for each of the categories:

|  |          |
|--|----------|
| set-top aerials in use for main set      | 1 – 15%  |
| set-top aerials in use for secondary set | 5 – 35%  |
| loft aerials in use for main sets        | 5 – 15%  |
| loft aerials in use for secondary sets   | 2 – 22%  |
| internal aerial used for main set        | 7 – 25%  |
| internal aerial used for secondary set   | 11 – 50% |

Taking a mean value for each gives:

Set-top aerial

|               |     |
|---------------|-----|
| Main set      | 8%  |
| Secondary set | 20% |

Loft aerial

|               |     |
|---------------|-----|
| Main set      | 10% |
| Secondary set | 12% |

Internal aerial

|               |     |
|---------------|-----|
| Main set      | 18% |
| Secondary set | 32% |

The dipstick survey results from a different set of switchover areas are as follows:

|                     | Anglia<br>Post DSO | Central A<br>Post DSO | STV Central B<br>Post DSO | Central B<br>Post DSO | Yorkshire<br>Post DSO |
|---------------------|--------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| Sample (Unweighted) | 126                | 160                   | 152                       | 200                   | 174                   |
| New Rooftop Aerial  | 23%                | 26%                   | 11%                       | 20%                   | 15%                   |
| New Set top Aerial  | 2%                 | 3%                    | 0%                        | 2%                    | 1%                    |

i.e. an average of 1.5% of households reporting a replacement set-top aerial for DSO. The overall usage of set-top aerials must therefore be higher than this since not every user of a set-top aerial will have needed a replacement.

## CONCLUSIONS

The proportion of main sets connected to set-top aerials across the UK is around 8%, but with significant regional variations.

The proportion of secondary sets connected to set-top aerials is around 20%.

The number of receivers using loft aerials is around 10% of main and secondary receivers.

In total, internal aerials are used by around 18% of main receivers and 32% of secondary receivers in those households, some 27% of the receiver population where DTT is used for the main set. Relating these percentages to the BARB Q4 2011 Establishment Survey figures, in all homes where DTT is used for the main set:

| Main set      |                             |                          |             |                             |                |           |
|---------------|-----------------------------|--------------------------|-------------|-----------------------------|----------------|-----------|
| DTT usage     | Set-top aerial              |                          | Loft aerial |                             | Total internal |           |
| sets          | %                           | sets                     | %           | sets                        | %              | sets      |
| 10,800,000    | 8                           | 864,000                  | 10          | 1,080,000                   | 18             | 1,944,000 |
| Secondary set |                             |                          |             |                             |                |           |
| DTT usage     | Set-top aerial <sup>a</sup> | Loft aerial <sup>b</sup> |             | Total internal <sup>c</sup> |                |           |
| sets          | %                           | sets                     | %           | sets                        | %              | sets      |
| 20,000,000    | 20                          | 4,000,000                | 12          | 2,400,000                   | 32             | 6,400,000 |
| Total sets    |                             |                          |             |                             |                |           |
| DTT usage     | Set-top aerial              | Loft aerial              |             | Total internal              |                |           |
| sets          | %                           | sets                     | %           | sets                        | %              | sets      |
| 30,800,000    | 16                          | 4,864,000                | 11          | 3,480,000                   | 27             | 8,344,000 |

**4,864,000 DTT receivers currently rely on set-top aerials (16%)**

**3,480,000 DTT receivers rely on loft aerials (11%)**

**8,344,400 receivers in total rely on internal aerials (27%)**

**Notes a, b c:** Since DTT reception on secondary sets in households where the main set uses satellite or cable is ignored, the figures for secondary sets are likely to be an underestimate of the total UK reliance on internal aerial reception since not all sets in satellite or cable homes will be connected to an external aerial.

The overall conclusion therefore remains unchanged from the 21<sup>st</sup> November 2011 report (*indoor\_aerial\_summary\_20111121.pdf*):

**Reception using internal aerials is a significant factor in the way DTT is accessed in the UK and it must be taken into consideration when considering protection from other services.**