

## A2. Listed events model document

### Purpose

- A2.1 This documentation is provided to assist stakeholders in navigating the model we have published alongside the listed events statement. The purpose of the model, and the underlying policies, are as explained in the statement.
- A2.2 The inputs to the model are:
- a) BARB Establishment Survey (BARB ES) data (we have used Q4 2018)
  - b) DTT coverage data as set out in the UK Planning Model (we have used post clearance data - ref 7.032)

### Changes following the consultation

- A2.3 Following publication of the consultation and updating of our input data we noted that recent BARB ES data indicated that the proportion of UK individuals living within a household without a TV set connected to a standard platform had increased. For the purpose of the consultation, we had calculated how many of these individuals with broadband (or other IP connectivity) had the ability to watch television programme services by reference to one question in the BARB ES, namely whether these individuals were watching TV programmes via a computer/tablet (if those devices were the main screen). However, this did not capture all households with the ability to receive TV programmes via their broadband connections as, for example, some households with access to VOD services may not have been included.
- A2.4 In the light of the increase in numbers of individuals living within a household without a TV set connected to a standard platform, we analysed the BARB ES further in order to calculate with more precision the number of individuals from this group with broadband (or other IP connectivity) who have the ability to watch television programme services. For this assessment we now consider that households are capable of receiving television services delivered over broadband if they watch any TV programmes online (including BVOD<sup>1</sup> or SVOD<sup>2</sup>) as this demonstrates that the household has adequate broadband speed and the in-home connectivity to view streamed television content.
- A2.5 We have therefore updated our data and model to assess capability to receive TV programmes online by reference to three questions in the BARB ES. If a household meets any of these criteria, we treat them as able to receive television services online:
- a) Watching TV programmes via a computer/tablet if those devices are the main screen;

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<sup>1</sup> Broadcast Video on Demand

<sup>2</sup> Subscription Video on Demand

- b) Subscription to SVOD services if viewed on the main screen<sup>3</sup>.
- c) Watching TV programmes on a TV set which is not connected to a standard platform (including on a smart TV with its own connection to the internet; via a box, stick or other device which allows you to connect to the internet such as Amazon Fire, Now TV or Apple TV; by connecting the TV set to a games console; or by connecting the TV set to a computer, tablet or smartphone).

A2.6 Finally, we have simplified the presentation of the model by combining BARB figures for free-to-view and pay satellite services.

## The spreadsheet

### Tab “User Groups”

A2.7 This tab acts as a reference to the Venn diagram published at Figure 1 of the statement.

### Tab “Flow chart”

A2.8 This tab describes the steps followed in the model as well as the formulae used.

### Tabs “Input Data”

A2.9 These tabs contain the data supplied by the BARB ES as well as the DTT coverage figures.

A2.10 For the BARB ES data, each row describes a household type, while the columns are:

- a) “*Total base*”: this is the number of people that belong in this household type,
- b) “*Watch online via best device*”: this is the number of people that watch video content using IPTV on the household’s main device within this household type.

### Tab “Model”

A2.11 This tab includes the calculations performed by the model as follows:

- a) Each row of the input data is assigned a user group (as per the Venn diagram in Figure 1) in columns *O* through *S*.
- b) Then, based on what user group the household type belongs to, a contribution to the various Venn Diagram segments is calculated. This is calculated separately for PSB and COM multiplexes, in columns *W* to *AC* and *AG* to *AM* respectively.
- c) Finally, the data is summed to form the total number of people in each segment, in row 42.

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<sup>3</sup> We note that BARB ES does not enable us to identify, in all cases, whether SVOD services are being viewed on the main screen, and we have therefore only included those SVOD viewers who we know view those services on their main screen.

## Tab “Results”

A2.12 This tab contains the results of the model, where the sums mentioned above are divided over the UK population and summed to form a grand total.

### Counting IPTV users

A2.13 BARB asked the respondents three separate questions regarding IPTV: whether they watch TV programmes on a TV set which is not connected to a standard platform; whether they watch TV online using a computer or tablet; and whether they access SVOD services such as Netflix or Amazon Prime<sup>4</sup>. We also ask if they have broadband or not. If a user has broadband, they might not necessarily use it to watch IPTV, therefore we redistribute part of the population in groups E, F and G.

A2.14 To illustrate, a fictitious example: of 100 people in Group F (DTT and broadband), 20 have said they watch TV online. 20 users are assigned to segment F and 80 users are assigned to segment B.

A2.15 BARB also asked what device the respondents use to watch TV online (connected TV, games console, laptop, tablet or mobile). As explained in the statement (paragraph 4.5) we only consider the “watch online via best device” figures.

A2.16 The redistribution formulae for the user groups are as follows:

**A** A = Total Base

**B** B = Total Base

**C** C = Watch Online via Best Device

**D** D = Total Base

**E** A = Total Base - Watch Online via Best Device

E = Watch Online via Best Device

**F** B = Total Base - Watch Online via Best Device

F = Watch Online via Best Device

**G** D = Total Base - Watch Online via Best Device

G = Watch Online via Best Device

**Table 1: Redistribution formulae for PSB multiplexes**

### Differentiating between PSB and COM DTT

A2.17 Whilst 98.8% of the UK population can receive channels on the PSB multiplexes, only 91.1% of the population can receive channels on the commercial multiplexes (4, 5, and 6), based

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<sup>4</sup> Now TV is treated as a pseudo-platform rather than a SVOD service

on DTT coverage data. We assume that all survey respondents that have claimed to have DTT are within the PSB coverage and thus we weight the COM percentage to account for this. Therefore, of all DTT users, we assume that 92.2%<sup>5</sup> can receive channels on the commercial multiplexes.

A2.18 For commercial multiplexes (4, 5 and 6), the redistribution formulae account for 92.2% of the total coverage, as shown below in Table 2:

<b>A</b>	$A = \text{Total Base}$
<b>B</b>	$B = 92.2\% \times \text{Total Base}$
<b>C</b>	$C = \text{Watch Online via Best Device}$
<b>D</b>	$A = 7.8\% \times \text{Total Base}$ $D = 92.2\% \times \text{Total Base}$
<b>E</b>	$A = \text{Total Base} - \text{Watch Online via Best Device}$ $E = \text{Watch Online via Best Device}$
<b>F</b>	$B = 92.2\% \times (\text{Total Base} - \text{Watch Online via Best Device})$ $C = 7.8\% \times \text{Watch Online via Best Device}$ $F = 92.2\% \times \text{Watch Online via Best Device}$
<b>G</b>	$A = 7.8\% \times (\text{Total Base} - \text{Watch Online via Best Device})$ $D = 92.2\% \times (\text{Total Base} - \text{Watch Online via Best Device})$ $G = 92.2\% \times \text{Watch Online via Best Device}$

**Table 2: Redistribution formulae for COM multiplexes**

A2.19 For example:

- a) 100 people in Group D are allocated as follows:
  - i) 92.2 users are assigned to segment D; and
  - ii) 7.8 users are assigned to segment A.
- b) 100 people in Group F, out of which 20 watch IPTV on their main device, are allocated as follows:
  - i)  $92.2\% \times 20 = 18.4$  users are assigned to segment F;
  - ii)  $7.8\% \times 20 = 1.6$  users are assigned to segment C; and
  - iii)  $92.2\% \times (100 - 20) = 73.8$  users are assigned to segment B.

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<sup>5</sup> 92.2% = 91.1% / 98.8%