



## Television measurement: for better and worse

Deloitte predicts that in 2014 the measurement of domestic television program viewing should become more accurate in a number of countries, including Germany and the UK, because of the introduction of hybrid measurement<sup>127</sup>. This new methodology integrates TV viewing on PCs, tablets and smartphones into overall viewing numbers, and also includes other data sets, such as set-top box channel selections and video-on-demand (VOD) server logs<sup>128</sup>. Without hybrid methodologies, TV consumption will be under-counted, particularly for the younger age groups that are more likely to watch on devices other than TV sets and more likely to use VOD, with an adverse impact on advertising and subscription revenues<sup>129</sup>.

However, while measurement of the domestic schedule should become more accurate, more people are likely to view TV schedules of other countries via over-the-top (OTT) services, leading to significant under-counting of TV consumption by some foreign-born individuals<sup>130</sup>.

Accurate measurement is fundamental to the largest ad product in the world: TV advertising, worth \$200 billion per annum globally, which is priced by ratings. Measurement has been critical to the continued TV ad spend against a background of increasing hours spent online and declining spend on other traditional media. Further, share of viewing audience is a key performance indicator for any license-fee funded channel. Audience size still matters for pay TV operators, for advertisers, and for on-screen talent looking to understand the potential exposure that a television appearance would offer. Subscription VOD (SVOD) providers wanting to show advertisements are also likely to offer their usage data for including on core TV viewing data.

In most of the largest TV markets, television viewing volume is monitored via viewer panels. When panel members start watching, they press a button, and a device in the home notes which program is being watched at that time, and who is watching it. Viewing data from each household is uploaded and analyzed, and typically published the day after. These panels are considered highly accurate at measuring live and catch-up viewing on TV sets<sup>131</sup>.

But monitoring has not kept pace with some of the recent changes in viewing behaviors and devices. For example, TV viewing is no longer restricted to television sets. In recent years, about one percent of viewing has been via on-demand services, typically with laptops, tablets, and smartphones, but also connected TVs<sup>132</sup>. Growth in on-demand viewing is about 25 percent year on year.

The steady growth in the number of channels has also led to a shift in viewing patterns. While the majority of viewing in most countries – even if hundreds of channels are available – is of a few programs on a few channels shown during prime time, there is growing viewing of programming with a small but significant audience share. This includes premium and specialist sports (such as darts and snooker), high-end drama and regional programming. For these programs, a 10 percent increase in viewers may not be accurately measured.

Measurement of viewing on other connected devices will be enabled by software placed on devices owned by panel members. There are various ways of recognizing programs being watched, such as using voice recognition to map dialog to a specific program, and identifying metadata tags embedded in program content by broadcasters<sup>133</sup>.

We estimate that viewing on non-TV devices in developed markets with 75 percent or higher broadband penetration represents about one to two percent of all viewing. But among younger viewers, the proportion is typically higher, at up to five percent, and crucially this is the age group that watches traditional television least. Under-counting this group would affect the perception of television's relevance and impact.

127 For more information on hybrid measurement, see: *Television: Why the future is hybrid*, BARB, 17 June 2013: <http://www.barb.co.uk/whats-new/278>

128 In 2013 Norway was the first country in the world to integrate web TV viewing into its television audience measurement, with reporting commencing on 1st November 2013.

129 For example, in the US average weekly viewing among 18 to 24 year olds fell about five hours from 26 hours and 28 minutes in Q1 2011, to 21 hours and 32 minutes in Q3 2013. See: *Are Young People Watching Less TV?* (Updated – Q3 2013 Data), Marketing Charts, 2013: <http://www.marketingcharts.com/vwp/televisionare-young-people-watching-less-tv-24817/attachment/nielsen-tv-weekly-viewing-by-age-q1-2011-q2-2013-sept2013/>

130 The 50th anniversary episode of *Doctor Who* provides a strong recent example of the demand for foreign broadcaster content. This epochal episode was broadcast live in 90 countries. Not every series and not every episode is likely to generate such interest, but this is a good example of how viewers are increasingly interested in international content, and for this to be made available live, or close to first broadcast. See: *Doctor Who regenerates into global cash cow*, *Financial Times*, 22 November 2013: <http://www.ft.com/cms/s/0/0b21796e-528e-11e3-9250-00144feabd00.html#axzz2mQEBYDg0> (Registration required)

131 Incorporating time-shifted viewing can provide a massive uplift for some programs, particularly more niche content that is typically broadcast out of peak hours. Currently viewing of some content is predominantly time-shifted, but this is normally for titles that would attract less than five percent share of prime time viewing. Programs earning the highest ratings are watched mostly live; however there may be millions of viewers who watch time-shifted. The majority of time-shifted viewing tends to occur shortly after broadcast. As a rule of thumb, about half of all time-shifted viewing takes place on the same day as broadcast (and in some markets, such as Germany, this viewing is considered as equivalent to live); about half of the remaining time-shifted viewing occurs the day after broadcast; then half the remainder view on the second day, and so on. In other words, most television content has a limited shelf life, with certain genres, such as sports and news, being watched almost entirely live. In 2014, in some countries the period post broadcast during which time-shifted viewing is monitored is likely to increase. There are two main reasons for stretching the period in which time-shifted viewing is included. Firstly as the average size of the hard disk drive in digital video recorders is increasing, more hours of programming can be recorded. The first DTRs typically had about 80 gigabyte hard drives. The latest DTRs have two terabytes and larger. Even allowing for a shift to high definition programming, the number of hours that can be recorded on a DTR is significantly greater. Secondly, the period during which OTT content can be viewed is increasing, with a month post broadcast due to become available in the UK following an agreement between the BBC and independent producers, see: *BBC signs ground-breaking deal with Pact*, BBC, 17 October 2013: <http://www.bbc.co.uk/mediacentre/latestnews/2013/bbc-pact-deal.html>

132 In many cases, there has been no shift in behavior: all that has changed is the device. Today's teenagers in developed countries may watch on a 15-inch laptop, using their phones to instant message their friends; their parents may have made do with a 14-inch portable cathode ray tube (CRT) television set and a novelty-shaped wired phone. Both generations were exercising the same need: to consume television in privacy, with friends and outside of their parents' scrutiny.

133 Breakthrough in tracking IP television, BARB, 13 June 2013: <http://www.barb.co.uk/whats-new/277>

Inclusion of set top box (STB) data will improve the measurement for channels with smaller audiences. In 2014, it should lead to a lower margin of measurement error for viewing of specialized programming, perhaps falling from +/- 20 percent accuracy to +/- 10 percent accuracy. It may also lead to mainstream programs losing a marginal amount (fractions of a percent) of share. The inclusion of STB and VOD server log data should help improve measurement in the long run, although it will still only be approximate.

Hybrid measurement will not however reflect consumption of TV schedules of other countries, delivered via broadband. Hundreds of millions of people live away from their country of birth or origin: many of these would like to be able to watch that country's TV schedule. Satellite is one way of addressing this demand, either via subscription from domestic satellite-based broadcasters or by installing larger dishes. However this approach can be expensive and limited: the international channels of foreign broadcasters may not show the programs that friends and family of the foreign-born individuals are talking about. High-speed broadband enables demand to be met more easily, and those interested are more likely to live in cities where the fastest access speeds are available<sup>134</sup>.

Following foreign TV schedules is not restricted to those born abroad: fans of programming in other countries may use on-demand services to view programs ahead of the broadcast schedule in their own country. For example, those wanting to watch the latest series of a US drama can use paid-for on-demand services to watch programs as soon as they are broadcast in the US, months ahead of their broadcast release window in their home country<sup>135</sup>. If legal services are not available, some may seek illegal alternatives – sometimes by millions of individuals<sup>136</sup>.

Deloitte expects that as a result of foreign TV schedules becoming available via OTT services, the majority of viewing for some foreign-born individuals may fall outside of current measurement systems.



134 In the UK, as of the 2011 census, 12.3 percent of the population was foreign born and eight percent were foreign citizens. The concentration of those categorized as 'foreign born' is higher in cities, which also generally have better broadband networks. In inner London, 42 percent of the population was foreign-born; in outer London the figure was 32 percent. See: Migrants in the UK: An Overview, The Migration Observatory, 17 December 2013: <http://migrationobservatory.ox.ac.uk/briefings/migrants-uk-overview>

135 For example, Netflix subscribers in the UK and Ireland were able to watch episodes of *Breaking Bad* shortly after the show was broadcast in the US. *Breaking Bad* finale coming exclusively to Netflix in UK and Ireland starting August 12, The Next Web, 26 July 2013: <http://thenextweb.com/uk/2013/07/26/breaking-bad-finale-coming-exclusively-to-netflix-in-uk-and-ireland-starting-august-12/>

136 According to one analysis, about 11 million subscribers watch *Game of Thrones* illegally, and about four million access pirate copies. See: 'Game of Thrones' exec says piracy is 'better than an Emmy.' He has a point, The Washington Post, 9 August 2013: <http://www.washingtonpost.com/blog/the-switch/wp/2013/08/09/game-of-thrones-exec-says-piracy-is-better-than-an-emmy-he-has-a-point/>

137 Awareness of the ability to mirror smartphone content, including video, on to a television screen is already quite high according to one survey, which found that 40 percent of smartphone and tablet owners were aware that this was possible. See: Screen mirroring awareness reaches 40 percent of smartphone and tablet owners, according to The NPD Group, NPD Group, 15 April 2013: <https://www.npd.com/wps/portal/npd/us/news/press-releases/screen-mirroring-awareness-reaches-40-percent-of-smartphone-and-tablet-owners-according-to-the-npd-group/>

### Bottom line

The current approach to quantifying television consumption was most accurate when there was a limited choice of channels, there was no other viewing choice and viewers watched on TV sets. In this context, a sample of a few thousand viewers was an accurate guide to how many people watched each program, and the share for each channel at each point of time could be estimated with a high degree of certainty.

While watching television has remained a firm feature in the lives of billions of people around the world, where, when and what we watch has evolved, necessitating a move to hybrid measurement. However hybrid measurement is likely to be a work in progress in 2014, with significant iteration required to get the best out of the additional data sources. In the long-run this new approach should be more accurate; in the near-term it may introduce some distortions.

For example adding in broadcasters' video-on-demand server data has the potential to make measurement more accurate; server logs can tell exactly how many programs have been requested and, for streamed content, how long they have been watched for. However as of 2014, in the majority of cases, these logs do not measure how many people watched each program; while it is likely that a program streamed to a smartphone is being watched by one person, that content may be mirrored on to a television set and watched by a household<sup>137</sup>. Further, if programs are downloaded to be watched later, the service may not measure if, or for how long, the content is watched. Including VOD data requires all entities that provide viewing data to have the same parameters.

The key advantage of incorporating STBs into measurement is their quantity: there are hundreds of millions of units around the world which can log which channel they are tuned to. But STB data has three principal deficiencies. It cannot tell who in the home is watching each program. It may not even know if the TV set is on: a STB may remain on, and tuned in, when the TV set has been off for many hours. And finally, the platform owners collecting STB data may not know the membership of each customer's household.

Analysis of STB data along with measurement data enables the development of algorithms that can interpret STB patterns better. For example a STB switched to the same channel for two hours after midnight, with no zapping between ad breaks, is likely to be connected to a TV that has been switched off.

Measurement of television viewing is getting more complex, and as a result may get more expensive. Adding additional devices and measuring viewing of foreign TV schedules are technically possible, but add to costs, possibly significantly. In some regards, fully comprehensive measurement, which includes a range of foreign TV schedules, may not be worth the effort or the cost.

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