



Forecasting scenarios for children's television to 2012

An independent research report by Attentional

The future of children's television
programming

Research annex

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Foreword

Ofcom initiated the review of children's television programming in response to a number of consumer and market changes. These include an increase in the range of media available to many children and a growing number of dedicated children's channels, as well as changes in the way children consume media. As a result, traditional commercial public service broadcasters are facing significant pressures on their ability to fund original programming for children.

These changes are occurring in the context of a new framework for the regulation of children's programming, set out in the Communications Act 2003. Since the Act, ITV1, which had historically played a role in delivering a strong alternative voice to the BBC in terms of children's programmes, has significantly reduced its commitments to children's programming. This development, together with the other consumer and market changes outlined above, has led many to ask how public service children's programming can continue to be delivered in the future.

The Communications Act requires Ofcom to report on the fulfilment of the public service broadcasters' public service remit at least once every five years and to make recommendations with a view to maintaining and strengthening the quality of public service broadcasting in the future. In preparation for Ofcom's second full public service broadcasting review, Ofcom has concentrated on the children's programming aspects of public service broadcasting, focusing on the future prospects for delivery of a wide range of high quality and original content for children.

Ofcom's report on the *Future of Children's Television Programming* was published on 3 October 2007 and sets out in full the findings from our research. As part of that report, Ofcom commissioned independent research agency, Attentional, to forecast potential viewing levels to children's television until digital switchover in 2012 and the composition of viewing of children's channels and slots within this, based on three possible scenarios for changes in the provision of children's programming. This annex sets out the findings from Attentional's research.

Section 1

Forecasting scenarios for children's television to 2012

1.1 Forecasting viewing to children's television

The prevailing trend of the last decade is that children's consumption of television overall has declined. Within this there has been a shift away from viewing on the PSB main channels (BBC One, BBC Two, ITV1, Channel 4, Five) towards dedicated children's channels.

Ofcom commissioned independent research agency Attentional to forecast potential viewing levels to children's programming overall until digital switchover in 2012, as well as the composition of viewing of children's channels and slots within this, based on a number of possible scenarios.

In this analysis children's programming is defined as all programming on the dedicated children's channels, together with children's programming (as defined by the BARB children's genre classification) on BBC One, BBC Two, ITV1¹, Channel 4 and Five and the children's slots on non-terrestrial generalist channels. (See Section 2.2.3 for full details.)

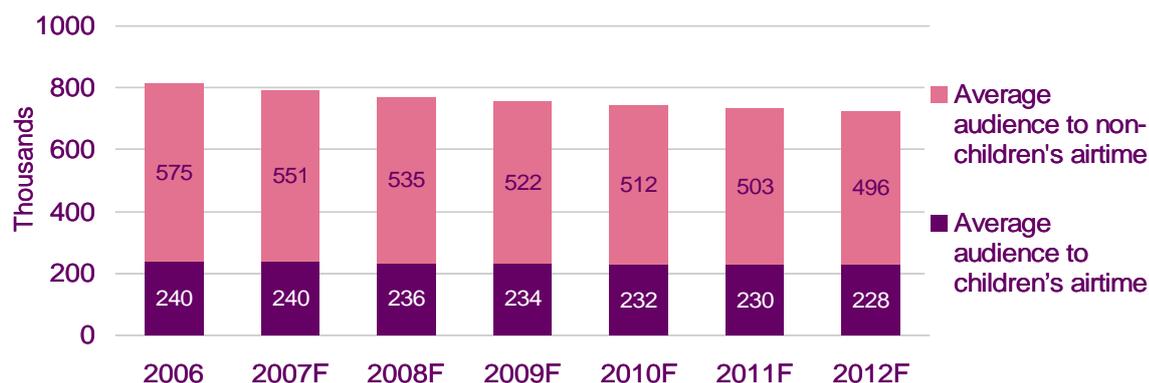
1.1.2 Television audiences

Attentional's modelling work is based on three underlying observed trends. Firstly, there is likely to be a continued fall in the size of the child population (based on projections from the Government's Actuary Department) which will lead to a decrease in the number of potential child viewers. Secondly, there is likely to be a continued fall in the size of average audience to television among children aged 4-15 years (based on the current downward trend observed in BARB viewing figures, which could potentially be due to increased competition from other media). Thirdly, there is likely to be a continued growth in the number of children with access to digital terrestrial television (Freeview) and cable/satellite television and a decline in analogue terrestrial homes. (The modelling does not explicitly take account of other variables such as internet access and usage. It is assumed that these factors will be reflected in the underlying trends outlined above.)

Attentional's work suggests that over the next six years a decline in the number of children aged 4-15, combined with a decline in their average hours of daily viewing, is likely to produce an 11% drop in the average audience for all television (from 814,000 children aged 4-15 in 2006 to 724,000 children in 2012). Within this, the number of viewers of children's television airtime will fall by only 5% (from 239,500 children in 2006 to 228,200 children in 2012).

¹ GMTV is incorporated within ITV1 in this analysis.

Figure 1: Forecast average audience to total television (000s)

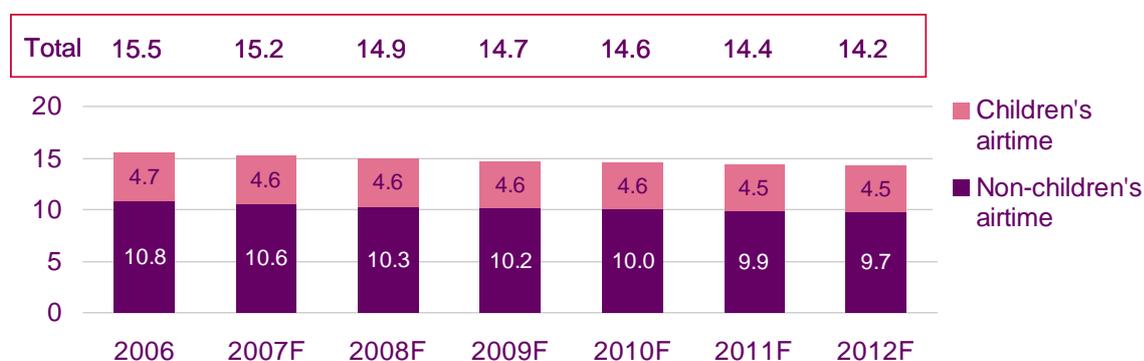


Source: Ofcom/Attentional. Note: among children aged 4-15 years.

1.1.2 Television viewing

The net impact of these changes is that while children's average weekly television viewing hours are expected to decline by 8% (from 15.5 hours per week in 2006 to 14.2 hours in 2012), the share of viewing that children's airtime represents is forecast to increase moderately, from 29.6% to 31.5% of total children's viewing. This forecast is supported by the trends we are currently observing in changes to television viewing: when children are given more viewing options at the times when most of them are viewing in later afternoon and early evening, as happens in multi-channel households, they tend to increase their viewing of dedicated children's channels at the expense of viewing in non-children's airtime. We expect that this trend will continue in homes yet to switch to digital television.

Figure 2: Forecast for children's average weekly hours of viewing



Source: Ofcom/Attentional/BARB. Note: this is based on children 4-15 years.

In short, a forecast for the children's television market to 2012 is that dedicated children's channels will gain a larger share of children's viewing, in the context of a broader decline in overall children's television viewing.

1.1.3 Scenarios for changes in viewing

To assess the cumulative effect of these potential changes, Attentional modelled the likely impact on viewing share in children's airtime among children 4-15 years for the following different channel groupings:

- BBC One/BBC Two;
- CBBC/CBeebies;
- Commercial Public Service Broadcasters (ITV1, Channel 4 and Five);
- Commercial children's channels and children's slots on the non-terrestrial generalist channels, grouped together and referred to in this analysis as 'commercial non-terrestrial' children's airtime.

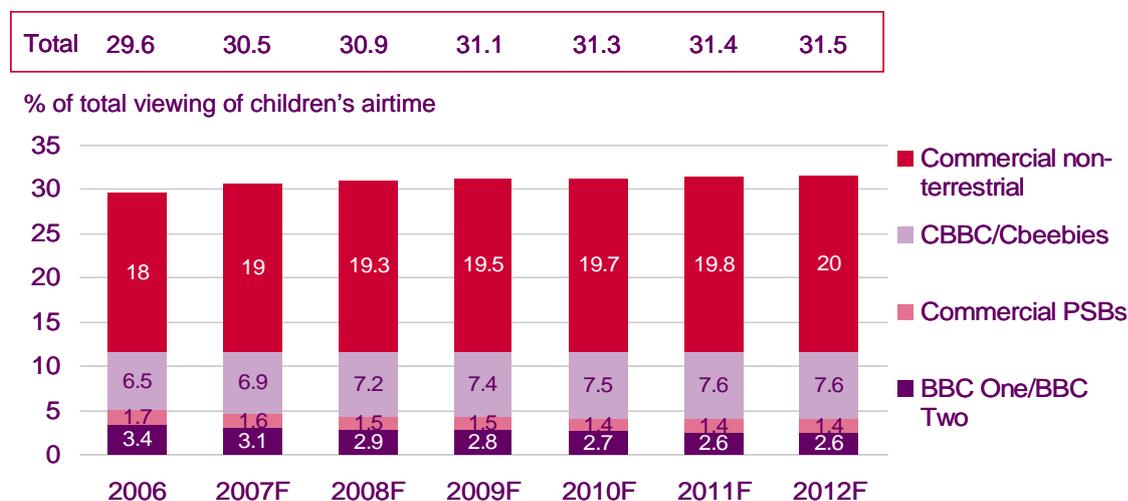
Attentional undertook forecasts for three different possible scenarios which represent hypothetical changes in the provision of children's programming:

- Base-case forecast – projection based on historic trends in performance by channels in 2006 and projected changes in television viewing and television audiences (detailed below);
- Scenario 1 – removal of children's programming (CITV slot) on ITV1; all BBC One's children's programming transferred to BBC Two; preschool slot *Milkshake* on Five to continue but removal of *Shake* as announced by Five in Q2 2007; all other channels as per 2006 base case;
- Scenario 2 - as Scenario 1, but with an increase in the volume of UK originated programming on the commercial children's channels, allocating at least 10% of each schedule to UK programming.

1.1.4 Base-case forecast

A base-case forecast has been projected on the basis of the historic trends in performance by channels in 2006 and the projected changes in television viewing and television audiences detailed above. This forecasts the total share for the BBC channels taken as whole to remain stable at around 10%, a slight decline for the commercial PSBs from 1.7% total share in 2006 to 1.4% in 2012 and a slight increase for the commercial children's channels and slots from 18% in 2006 to 20% in 2012.

Figure 3: Base-case forecast for share of viewing in children's airtime



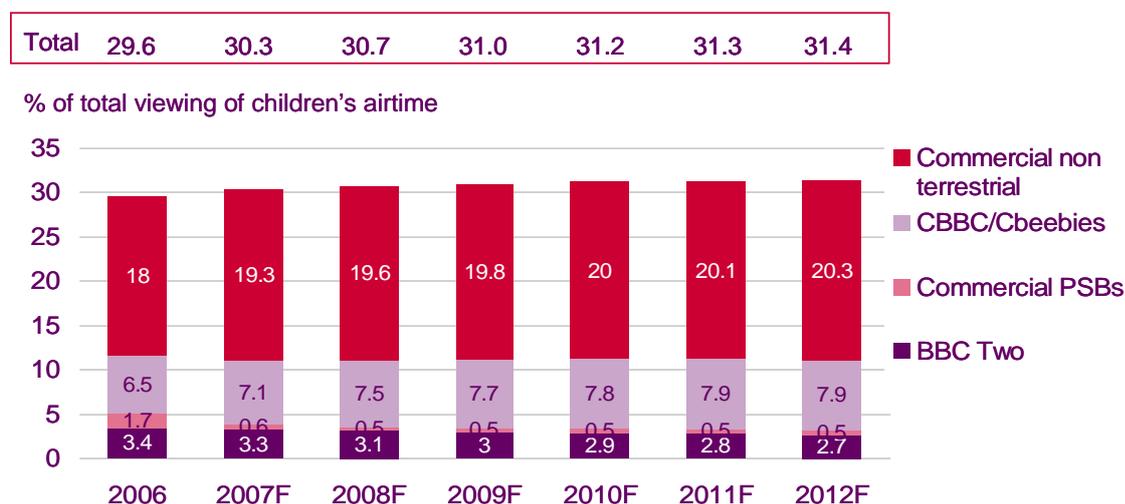
Source: Ofcom/BARB/Attentional. Note: This is based on children 4-15 years.

1.1.5 Scenario 1

Scenario 1 reflects in part changes in the provision of children's programming that have been effected in 2007 and incorporates some additional more speculative potential changes. The likely impact of Scenario 1 is that the share of children's viewing of children's airtime on the commercial PSBs is likely to fall from 1.7% to 0.5% of total viewing. This drop is because ITV1 accounted for most viewing of these three PSB channels in 2006. Most of this share of viewing is forecast to migrate to the dedicated children's channels in time, although in the immediate term some viewing among children in analogue terrestrial-only households is likely to migrate to BBC One and BBC Two. However, one third of the viewing that these three PSB channels represented in 2006 (0.4% of total children's viewing) may be lost to the market altogether.

The likely impact of a shift of BBC One children's slots to BBC Two and CBBC/CBeebies is that the share of children's viewing of children's airtime on the BBC overall is likely to remain stable, with a continued migration of share of viewing to CBBC and CBeebies. By 2012, BBC Two children's output is modelled to account for 2.7% of total children's viewing, while CBBC/CBeebies are likely to account for about 8%. (Figure 4)

Figure 4: Forecast of impact of Scenario 1 on share of viewing in children's airtime

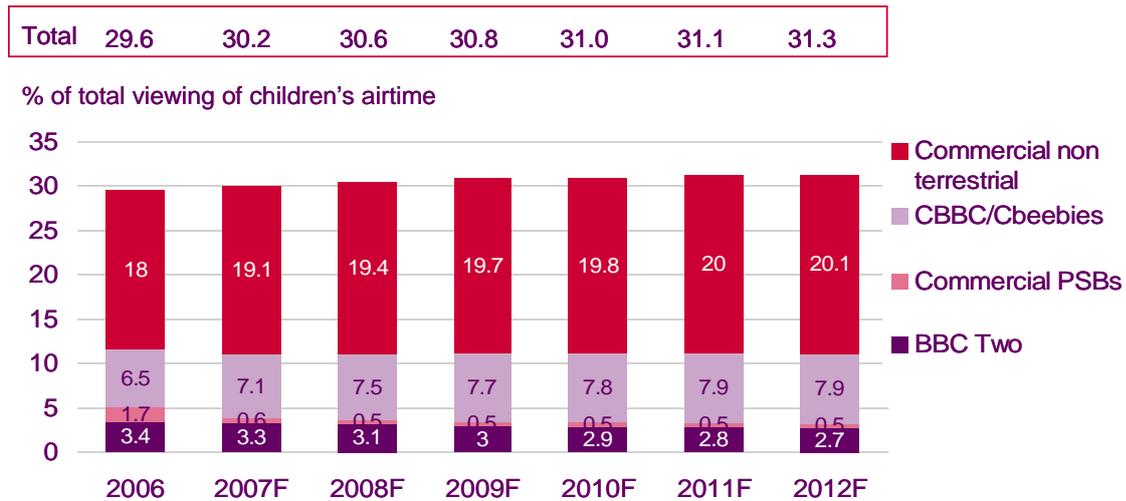


Source: Ofcom/BARB/Attentional. Note: this is based on children 4-15 years.

1.1.6 Scenario 2

The likely impact of Scenario 2 (which models an increase in output of UK content on the commercial children's channels) is marginal. The increase in share of viewing of commercial children's channels over the period as shown in Scenarios 1 and 2 (from 18% to 20%) is largely driven by the increased penetration of multi-channel platforms and the increased availability of commercial children's channels (as in the base-case forecast).

Figure 5: Forecast of impact of scenario 2 on share of viewing in children's airtime



Source: Ofcom/BARB/Attentional. Note: this is based on children aged 4-15 years.

Overall, modelling the potential changes outlined above based on the current market suggests that the relative growth in children's viewing of children's airtime is likely to be a result of the increased availability of dedicated children's channels. The BBC children's services, as a whole, are likely to retain about 11% share of total children's viewing. However, if ITV1 withdraws from the market, the other commercial PSBs, Channel 4 and Five (carrying mainly UK-originated programming) are forecast to account for minimal viewing share.

Section 2

Methodology

2.1 Children's television viewing model

This section provides details on the modelling used by Attentional to forecast the changes in channel audiences from 2007 to 2012.

Attentional's scenario modelling uses a primary and secondary model.

The primary forecasting model predicts total television viewing for children 4-15 years by:

- television platform (defined as analogue terrestrial only, digital terrestrial only and cable/satellite households);
- socio-economic group for UK households.

The secondary channel audience model forecasts individual channel audiences, derived from BARB 2006 channel audience data, which was analysed by channel, gender, age, television platform and socio-economic group.

The scenario modelling uses both models, by adjusting the predicted channel audience by the total television viewing forecast in order to illustrate the effect of hypothesised channel, slot and programme changes. Viewing to individual children's channels and children's programming overall is forecast by television platform, by age of child and by socio economic group.

Attentional's children's television viewing model is most accurate at the aggregate level of total television viewing by television platform and by socio-economic group.

2.1.2 Primary forecasting model

Underlying the primary forecasting model for total television viewing are 3 key model elements:

- Population;
- Television universe;
- Average hours of television viewed.

All the trended model elements have been smoothed and end points adjusted where necessary, to provide consistent estimates which were also reality-checked against underlying BARB data and other market forecasts.

Implicit assumptions in the model are that the current market churn rates with regard to cable/satellite and digital terrestrial television, and conversion from analogue terrestrial to digital television platforms are broadly consistent with the current market conditions. In addition there is the assumption that all ATT homes will convert to DTT or cab/sat by 2012.

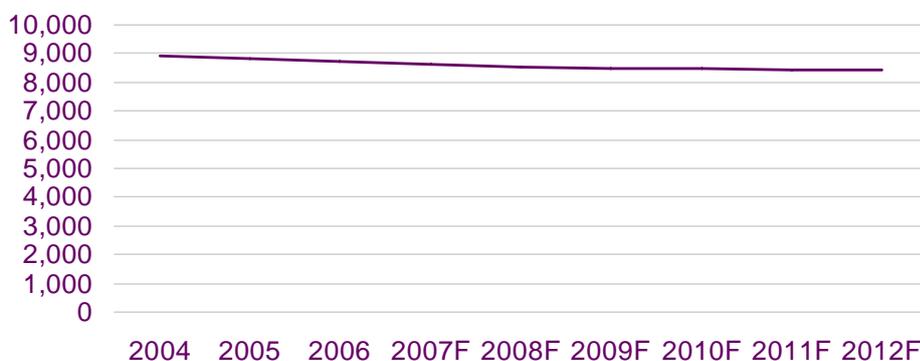
Regarding exogenous factors, the impact of other digital media or changing lifestyles, are assumed to have been captured in the modelling and extrapolation of the observed underlying downward trends (e.g. average daily hours of television viewed).

2.1.3 Population projections

The Government Actuary Department (GAD) forecast by age of the population in UK Households was used by Attentional to adjust and forecast the total numbers of children aged 4-15 for 2007 to 2012.

This data is subsequently used as an adjustment in the model to the television universe estimates to incorporate the impact of underlying population changes. The implicit model assumption is that the socio-economic profile of households with children remains consistent in this time frame and it is therefore also assumed that the BARB averaged socio-economic groups remain consistent over the forecast period.

Figure 6: Children aged 4-15 years population projection to 2012 (000s)



Source: Government Actuary Department.

2.1.4 Television universe

The forecasts for the children’s television universe by television platform and by socio-economic group is derived from data trends observed in the relevant BARB television universe sizes for children aged 4-15 years. The BARB universe trends from 2003 to 2006 were used as the basis for the fitting of time trend algorithms.

A logistic function was the form of the time trend best fit for forecasting universes for:

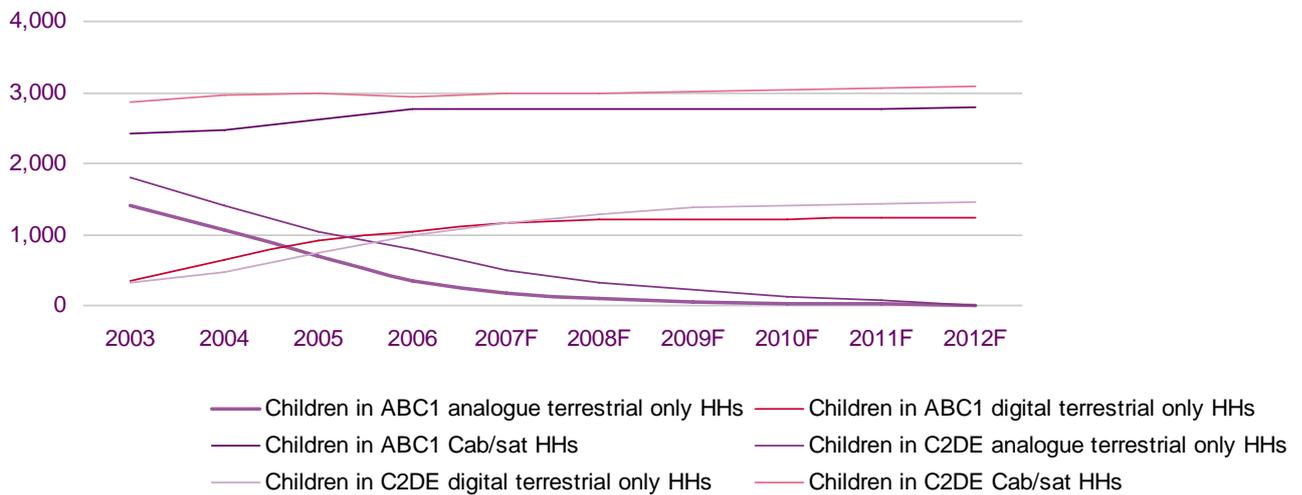
- Children in ABC1 digital terrestrial only households;
- Children in C2DE digital terrestrial only households;
- Children in ABC1 cab/sat households.

The universe for children in C2DE cab/sat households was modelled as a Quadratic Function.

The 2003-2006 universes for children in analogue terrestrial only households were calculated as a residual, by subtracting the relevant multichannel BARB universe from the

BARB network panel universe. From 2007 onwards children in analogue terrestrial only households was calculated as a residual, assuming a fixed population, with an endpoint switchover “fit” assumption that all analogue terrestrial only television households are converted by 2012. No other switchover effects were incorporated in the model. The universe forecasts were adjusted using annual rate of change in GAD population projections as outlined previously.

Figure 7: Children aged 4-15 years, television universe projection to 2012 (000s)

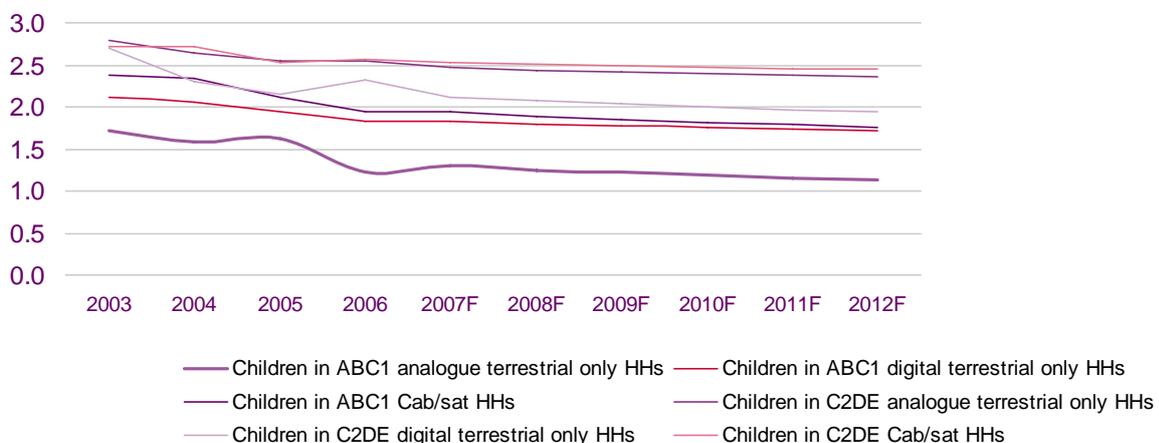


Source: Attentional/BARB.

2.1.5 Average hours of television viewed per day

The relevant BARB audience viewing data for 2003-2006 from the BARB multichannel panel was used to forecast average hours viewed for children aged 4-15 years in digital terrestrial and cab/sat households. To maintain a consistent base in the overall total television model, the average hours viewed for children in analogue terrestrial only households in 2003-2006 was derived using the analogue terrestrial universe and analogue terrestrial total television viewing estimates. A Power Function was the time trend used to forecast average viewing for all platforms and socio-economic groups from 2007 to 2012.

Figure 8: Children aged 4-15 years, average hours of television viewed per day, projection to 2012

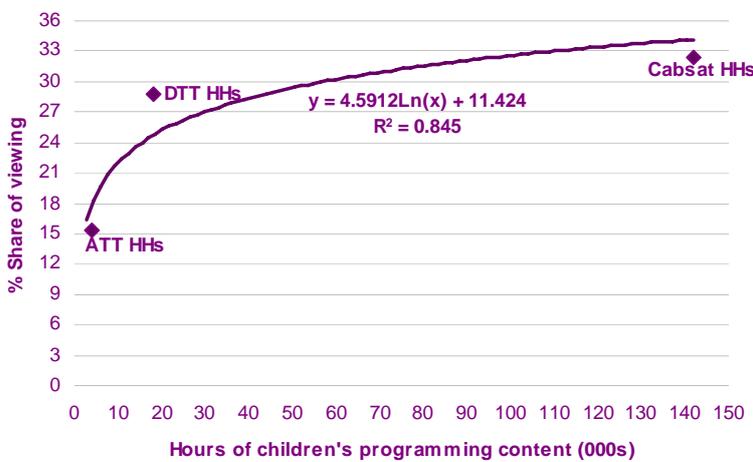


Source: Attentional/BARB.

The most significant increase in average hours viewed among children aged 4-15 years is observed when converting from analogue to digital television, rather than that observed from households switching between digital terrestrial and cab/sat television platforms. On switching platforms the viewer is assumed to behave as modelled for the new platform. The model is therefore sensitive to switchover take-up rates in the forecast period, as this is the key underlying upward trend in viewing.

Children's viewing of children's programming follows a logarithmic trend in relation to the volume of available children's programming content. This can be seen in Figure 9 which shows an increase in share of viewing of children's programming on conversion from analogue terrestrial to digital terrestrial television (from 15.4% to 28.8% share) and only a small increase from digital terrestrial to cab/sat television (28.8% to 32.4% respectively).

Figure 9: Share of viewing to children's programming by total hours of children's programming, children aged 4-15 years, 2006

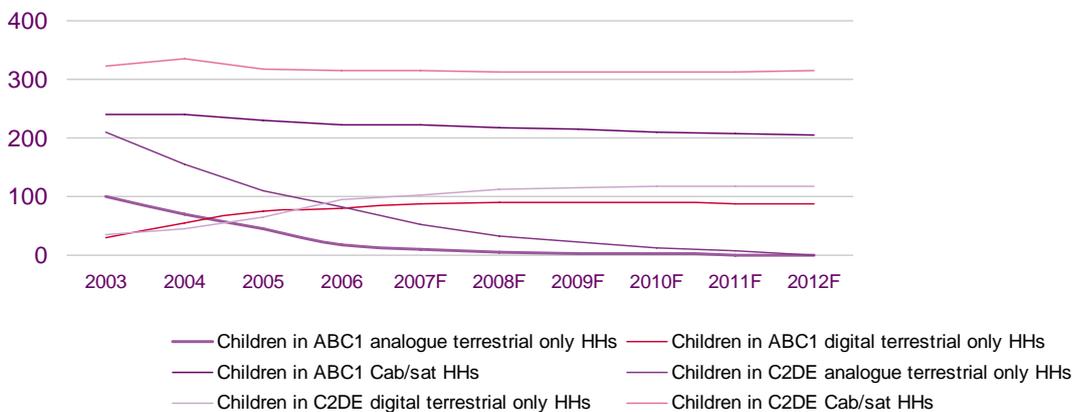


Source: Attentional/BARB.

2.1.6 Total television viewing

The television universe and average daily hours viewed forecasts were then combined to produce total daily television viewing forecasts for each of the six demographic groups (children by television platform by socio economic group).

Figure 10: Children aged 4-15 years, total television viewing, projection to 2012 (000s)



Source: Attentional/BARB, in 000s of children aged 4-15.

The total television viewing audience is then used as a multiplier with the actual channel or slot audience for 2006 in order to forecast a channel or slot's audience, under the assumption that current competitive conditions remain the same and a given channel's audience will change in line with total television viewing at the socio-economic and television platform resolution level used.

2.2 Channel audience model

Attentional undertook forecasts for three different scenarios which represent potential changes in the provision of children's programming:

- Base-case forecast – projection based on historic trends in performance by channels in 2006 and projected changes in television viewing and television audiences;
- Scenario 1 – removal of children's programming (CITV slot) on ITV1; all BBC One children's programming transferred to BBC Two; preschool slot Milkshake on Five to continue but removal of Shake as announced by Five in Q2 2007; all other channels as per 2006 base case;
- Scenario 2 – as Scenario 1, but with an increase in the volume of UK originated programming on the commercial children's channels, allocating at least 10% of each schedule to UK programming.

For each of these scenarios Attentional produced annual channel audience and share of viewing forecasts through to 2012 for all dedicated children's channels, children's slots on the main PSB channels and the children's slots on the non-terrestrial generalist channels (such as Five Life and Sky One) as listed in the table below.

Attentional used the channel audience model to forecast annual channel average audiences and channel shares. The channel audience model was based on actual 2006 BARB channel average audience data, whereby shares among children in multichannel households were produced on the BARB multichannel network panel and shares for children in analogue terrestrial only households were produced on the BARB network panel. These were adjusted to take account of anticipated (2007) and in year (2006) channel changes.

The model forecasts channel audiences in the same proportion as observed in 2006 BARB data. The forecasts for total television viewing audience (as explained in Section 2.1.6) were used as a multiplier with the actual channel or slot audience for 2006 in order to forecast a channel or slot's audience under the assumption that the current competitive conditions remain the same, and a given channel's audience will change in line with the total television viewing at the socio-economic and television platform resolution level used.

A higher level of data granularity is available for channel audience modelling options; ages 4-9, ages 10-15, gender, platform, socio-economic groups, day part (weekday and weekend). Forecasts at the individual channel level should however be viewed with caution.

The model is sensitive to significant channel changes, both in terms of content and overall numbers of channels from 2006.

2.2.1 Channel audience model: Assumptions for Scenario 1

On the transfer of children's programming from BBC1 to BBC2, all viewing is assumed to migrate. The gain to other viable channel alternatives, due to the hypothesised changes on ITV1 and Five, is in inverse proportion to their current share of viewer hours. The re-distributed viewing is assumed to be in proportion to current shares of the remaining viewing by platform, by demographic group, by day part for weekday and weekend. Schedule changes as outlined in Scenario 1 were taken into account in this scenario model.

2.2.2 Channel audience model: Assumptions for Scenario 2

The modelling of the impact of increasing UK originated programming to the 10% threshold was calculated at the channel group level, to mitigate the effects of individual programme scheduling. The assumption was made that on changing from Non-UK to UK programming, the UK programming achieves the same average audience as the channel group's UK programming. Schedule changes as outlined in Scenario 2 were taken into account in this scenario model.

2.2.3 Children's channels and slots

Children's channels		
Boomerang	Boomerang + 1	Cartoon Network
Cartoon Network Plus	Cartoon Network Too	CITV
Discovery Kids	Disney Channel	Disney Channel + 1
Disney Cinemagic	Disney Cinemagic + 1	Jetix
Jetix + 1	Nick JR	Nick JR 2
Nickelodeon	Nickelodeon Replay	Nicktoons
Playhouse Disney	POP	Tiny Pop
Toon Disney	Toonami	CBBC
CBeebies		

Children's slots		
BBC One	Five	GMTV2
BBC Two	ABC 1	GMTV2 +1
ITV1	Five Life	Sky One
Channel 4	TMF	