

Industry Perspectives on the Future of Commercial Communications on TV and TV-like services

An independent report commissioned by
the Office of Communications (Ofcom)

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Introduction

This report reviews the possible evolution in the market for advertising on television and TV-like services given the likely developments in technology, consumer behaviour and service delivery by broadcasters and others. It was commissioned by Ofcom to complement their own research and to enhance their understanding of the perspectives of leading companies. This report is not part of any formal Ofcom process, but is intended to help Ofcom assess the possible implications of market developments on its role in protecting audiences and ensuring the provision of certain forms of TV content.

The report draws on interviews with industry leaders conducted by Jon Gisby¹ in the final quarter of 2012 and the first quarter of 2013. Interviewees were typically C-level executives, and were selected from leading broadcasters, digital distribution companies, platforms, producers, agencies and brands. In addition relevant experts from consultancies, industry bodies and Ofcom itself were included. I am grateful for their time, insights and candour. In return I have promised discretion and confidentiality as appropriate.

The scope of the review was enormous and assessed a broad range of opinions and perspectives from industry players, and of the trends and developments in technology, consumer behaviour and the regulatory environment. Its value will lie in summarising insights derived from industry practitioners and desk research, but these insights are inevitably partial rather than exhaustive.

The report starts with a brief review of the current UK environment for TV advertising, the broadcast services it supports, and the widely held assumptions on likely developments by 2020. It then reviews the highly fragmented and rapidly changing market for consumer technology that is TV and video related, and the possible impacts these changes will have for audience behaviour and video / broadcast services. A framework for understanding the developments in advertiser funded content is presented, identifying how existing and new opportunities may develop given the existing regulatory frameworks of (e.g.) the Ofcom Broadcasting Code, the BCAP Code: the UK Code of Broadcast Advertising, the CAP: UK Code of Non-broadcast Advertising, Sales Promotion and Direct Marketing and the ATVOD Code for On-Demand Programme Services. Case studies will highlight how brands are exploring these new opportunities to engage with audiences.

The project was not designed to review the impact of existing regulations, nor to develop recommendations on changes that may be considered. Rather, its purpose is to raise awareness and understanding, to stimulate debate and discussion, and to clarify the objectives and priorities of ongoing work within Ofcom. However, where specific observations about regulation have been put to me, I have included them. I have also included some general recommendations to guide Ofcom's ongoing assessments of the market.

Executive Summary

The report has four main conclusions:

- TV remains the only medium that delivers the reach and impact that major advertisers require, and its importance as a commercial medium is underpinned by decades of research on its effectiveness. There is a robust ecosystem of advertisers, agencies, producers and broadcasters, and this will sustain the virtuous circle between advertising budgets and content investment, ensuring that TV advertising remains the dominant form of commercial communication until beyond 2020.
- Technology changes will enable dramatic change in the market. The proliferation of broadband, smart mobile devices, cheap screens, cloud-based services and social media will have a progressive and potentially profound impact on consumer behaviour, business models and content services. The impact of this innovation is currently nascent, and a sudden single transformation (a 'Kindle' or 'iTunes' moment) is unlikely. Instead there will be a messy but exciting period of innovation in technology and services whose cumulative disruptive impact will be significant. This is a new and potentially more important 'digital switchover', away from broadcast distribution towards personalized, internet based and data driven services, enabling UK consumers to access and engage with video content in entirely new ways.
- This disruption will curtail growth in linear TV spot advertising, and its relative importance will diminish. Brands and agencies are already seeking new ways to engage consumers either directly or in partnership with others. These new routes to audiences already include direct investment in TV programmes, complementary advertising via second screens, investment in video content delivered via the internet, and investment in alternative forms of engagement marketing. Each of these new revenue streams offer opportunities for diversification by brands, agencies, broadcasters and producers, but they often require new capabilities that sit uneasily alongside their core businesses. In parallel new distribution platforms and companies will emerge who invest in content, technology and audience acquisition on a global scale.
- Regulators face the same challenges as those faced by brands and media businesses: how to preserve the existing while creating the new, and how to prepare for inevitable but unpredictable disruption. The current regulatory framework for broadcast advertising mostly works well, and although it may need to evolve it will remain necessary until beyond 2020. However, as broadcast and internet delivered content converge, the distinctions between content and advertising will become harder to

maintain and the existing frameworks will struggle to accommodate the prolific innovation in advertising formats, the highly fragmented nature of their implementation and the scale of their cumulative impact on consumers. Regulators will face increasingly difficult choices about the appropriate scope of regulation, how to implement regulatory change, and how to balance consumer protection, innovation, investment in content and economic growth.

TV Consumption and the TV Ad Market

"TV is becoming the cockroach of the internet apocalypse...whatever the internet revolution throws at it, TV survives and survives and survives. Its resilience is conspicuous at a time of turbulent change."

Ed Richards, CEO Ofcom, Oxford Media Summit, January 2011

TV consumption remains strong, and may have room to grow

Despite the turmoil elsewhere in the media and entertainment industries, TV consumption remains in robust health. The experience for audiences continues to improve, fuelled by digital switchover, wider and flatter screens, PVR penetration, and more recently HD and 3D. In 2010 and 2011 viewing per viewer exceeded 4 hours per day for the first time, with commercially funded channels accounting for 64% of that viewing.ⁱⁱ The availability of Video-on-Demand (VOD) services from the broadcasters (iPlayer, 4oD etc) and platforms (Sky, Virgin) have increased rather than diminished the consumption of linear TV, by enabling viewers to catch up on missed episodes. The growing penetration of social media (Facebook and Twitter) and second screens (iPads and tablets) are providing opportunities for broadcasters and platforms to engage audiences in new ways both during live broadcasts and sustaining interest between broadcasts. While UK viewing times exceed those of other European markets, there is still room for more growth before we match the 5 hours per day consumed by US viewers.

TV remains the most attractive medium for big brands

Robust reach and consumption are sustaining TV advertising revenues. In 2010 TV advertising increased its share of the UK advertising market for the third consecutive year, a record investment of £4.3 billion, up 16% year on year. Although more money is now invested in internet based advertising, TV's 26.9% share of the overall market has remained remarkably consistent, and is comparable with 2000 when it achieved its highest ever share. TV's share of display advertising is at record levels, at around 43%ⁱⁱⁱ and the top 40 companies advertising on TV increased their spend by 5% in 2011.^{iv} This picture is consistent with forecasts in other countries, in many of which TV advertising budgets are growing both in absolute and relative terms.^v

Industry stakeholders identified four interlinked reasons why TV advertising remains so strong.

First, is its scale. UK viewers are watching 2.7 billion TV ads per day^{vi}. No other medium can provide that level of reach and impact. As one agency executive memorably put it: *"My clients' brands are used by billions people of a day around the world. If you're in the business of shifting pallets of deodorant, there's only one medium that can help."*

The second reason is the inverse of the first. The digital revolution is decreasing the importance of print and radio while fragmenting audience attention across a diverse range of internet sites and devices. This fragmentation and complexity increases the attractiveness of large but still well targeted TV audiences. TV also provides the control of context and environment which marketers need. One agency executive summarised it neatly: *"McLuhan was right, the medium is the message. My clients care passionately which channels their ads appear on, but are very wary of where their ads might end up on the internet"*. Investing billions in building brands and millions in individual campaigns incentivises marketers to rely on trusted relationships with agencies and broadcasters rather than the perceived risk of media planning via algorithms and digital start-ups. Indeed, some stakeholders argue that we are in a golden age of TV advertising, with the quality of the creative rising to reflect higher production values in TV programmes, the fear of ad skipping via PVR's and the desire for ads to go viral online.

Third, the effectiveness of TV is perceived to be well measured and researched. There are commonly agreed currencies for buying and selling commercial air time, and well established metrics for evaluating campaign effectiveness. Both of these are in sharp contrast to digital media, where both remain in their infancy. In addition, there are five decades of research that has persuaded marketers that TV campaigns are essential. As one agency executive put it to me: *"TV works, and there are decades of research to prove it, but convincing evidence from digital doesn't exist"*. Recent research by Peter Field and Les Binet has analysed over 800 case studies from the IPA database to identify the characteristics of the most successful advertising campaigns over the last thirty years. Their results were unequivocal: the most successful marketers are building awareness, fame and emotional attachment to their brands over the long term; they reach out to potential customers rather than focusing on their existing ones; and TV remains by far the most efficient and effective medium to achieve this. As they concluded: *"Campaigns that have used TV have significantly outperformed those that have not...Given a TV budget goes about 32 per cent further now than it did in the 1980's, one would expect the effectiveness of TV to have increased by more than 32 percent. Sure enough...TV is about 42 per cent more effective now"*^{vii}

The fourth reason for TV advertising's perceived strength is the robustness of the regulatory regime that underpins it. The complementary frameworks and rules of the Broadcasting Code (commercial references within editorial programmes), BCAP Code (TV and Radio advertising), CAP Code (non-broadcast advertising) and ATVOD Rules (commercial messaging in VOD services) are generally well understood and respected by industry and

(implicitly) by audiences. They are perceived by many to provide certainty and confidence, while evolving to take account of new technologies and enable new revenue streams.

Most TV consumption and ad forecasts remain optimistic

Given the above it is unsurprising that forecasts for TV consumption remain bullish. Ofcom's own forecasts suggest that hours per viewer will remain steady at around 4 hours per day, and that linear schedules will remain paramount. Despite the increased availability of on-demand video content, non-linear viewing from PVR's or online is currently around 10% of total viewing. The consensus view is that this will rise to about 20% by 2020, and that therefore 80% of viewing will still be to scheduled linear channels that are watched live.^{viii}

This level of viewing should sustain a healthy TV ad market, ensuring that TV advertising remains the most important commercial medium. This in turn should enable broadcasters to continue to sustain the large and valuable audiences needed for marketers to advertise to.

At least, that's the theory.

Changes in Consumer Technology

"Platforms, smartphones and broadband are a revolution. They are the new DNA that enables genetic mutation. It may take a little time, but it'll be rapid and dramatic when it happens"

Media Agency Executive

"The TV industry is in denial. Consumers are not spending 20 hours a week watching TV. They're spending 20 hours a week watching video content on a screen"

Digital Content Producer

Many of those I interviewed agree that broadcast TV will remain strong, but also highlighted the unprecedented and unpredictable technological changes that are now underway. Their belief is that these changes will have a significant impact on consumer behaviour, which in turn will influence advertiser spend. In their view there is therefore a risk that the virtuous circle of audiences generating ad revenues that fund programmes could become a vicious circle of advertisers redirecting spend, leading to less TV content funded, generating smaller and less attractive audiences.

To assess whether these views are valid, we need to understand the technology trends that are underway.

The Third Age of Consumer Video Distribution

We are entering the early stages of the third age of video distribution into the home.^{ix}

The first lasted from the 1950s to the 1990s and was characterised by limited bandwidth via heavily regulated spectrum and high capital costs. It created the major integrated broadcasters, and many of the regulatory principles that survive today. The second was from the 1980s until recently. Private bandwidth from cable and satellite created new capacity for channels, and created new business models in subscription and pay per view. Meanwhile home storage (VCRs and PVRs) and embryonic on demand services such as iPlayer and YouTube started to change consumer behaviour by weakening the links between programmes and broadcast distribution, and enabling new video producers to reach audiences directly.

The next phase will be characterised by essentially unlimited bandwidth, initially into the home and increasingly to mobile devices. Broadcast, VOD and other content is now

available from a wide range of sources and technologies: global and local, streamed and cached. It will be consumed on a plethora of devices, and will create rich sources of data that can be used to benefit audiences, advertisers and platform operators. And content can be monetised through a variety of business models: traditional broadcast advertising, highly targeted advertising to individual viewers, subscription, purchase, rental or subsidised by hardware sales. These business models are likely to co-exist for the same piece of content and / or the same viewer.

To understand the potential implications for advertisers, we need to understand these changes in more detail.

The table on page 12 highlights the transformational change that is currently underway, and which is accelerating rapidly. Less than ten years ago the majority of UK households received 3 commercially funded channels^x with adverts hermetically sealed into highly regulated breaks. Soon a majority of UK households will have at least half a dozen screens and devices capable of receiving commercially funded video content, sourced and broadcast from all over the world, containing advertising messages in dozens of different contexts, formats and regulatory frameworks.

This explosion in consumer choice is being enabled by four underlying technological shifts. Broadband internet has enabled video to be distributed over the internet, and some estimates suggest that it will shortly account for 90% of internet traffic^{xi}. Cloud based storage is enabling cheap storage outside the home, making it possible for limitless video to be available on demand at very low cost. Smartphones and tablets are ensuring that consumers can enjoy more processing power in their handheld device than has been available in set top boxes, and enabling consumption in new locations inside and outside the home. And finally the ability to generate, collate and analyse vast quantities of data creates new opportunities for consumers, content and advertisers to connect, and will eventually have a similar impact on the TV industry as it has on music, financial services and retail.

These technologies are creating a new and potentially more important 'digital switchover', away from mass broadcast technologies towards data-driven, personalised and internet based services, enabling UK consumers to access and engage with video content in entirely new ways.

The Changing Routes to Audience

Television sets are increasingly connected directly to the internet via set top boxes, blu ray players and games consoles. Within three years these connections will have reached the mass market with nearly 150m TV related connected devices in Europe and over 240m in the US. Of these 155m will be TVs connected directly to the internet via broadband, able to

Video distribution and monetisation, then and now

1950s to 1990s	1980s to recently	Now Onwards
<p>Content service:</p> <ul style="list-style-type: none"> Broadcast television <p>Consumer hardware:</p> <ul style="list-style-type: none"> TV set Acquired by consumer Common standards <p>Consumer software:</p> <ul style="list-style-type: none"> Not relevant <p>Underlying distribution</p> <ul style="list-style-type: none"> Analogue transmission <p>Commercial business model</p> <ul style="list-style-type: none"> Broadcast advertising <p>Who can monetise video content?</p> <ul style="list-style-type: none"> Commercial broadcasters 	<p>Content service:</p> <ul style="list-style-type: none"> Broadcast television Cable and satellite channels On Demand streaming <p>Consumer hardware:</p> <ul style="list-style-type: none"> TV set Set top box VCR / PVR PC <p>Consumer software:</p> <ul style="list-style-type: none"> EPG Internet browser <p>Underlying distribution</p> <ul style="list-style-type: none"> Digital transmission (DTT) Cable and Satellite IP / Internet (fixed) <p>Commercial business model</p> <ul style="list-style-type: none"> Broadcast advertising Broadcast sponsorship Internet advertising (video and display) Subscription Transaction (pay per view, rental) Advertiser funded programming <p>Who can monetise video content?</p> <ul style="list-style-type: none"> Commercial broadcasters Platform operators (e.g. Sky, Virgin) 	<p>Content service:</p> <ul style="list-style-type: none"> Broadcast television Cable and satellite channels On Demand streaming Push VOD Over the top streaming Digital download / rental <p>Consumer hardware:</p> <ul style="list-style-type: none"> TV set Set top box VCR / PVR PC Tablet (e.g. iPad) Smartphone Connected TV <p>Consumer software:</p> <ul style="list-style-type: none"> EPG Internet browser Apps & operating system (e.g. Apple, Android) <p>Underlying distribution</p> <ul style="list-style-type: none"> Digital transmission (DTT) Cable and Satellite IP / Internet (fixed and mobile) <p>Commercial business model</p> <ul style="list-style-type: none"> Broadcast advertising Broadcast sponsorship Internet advertising (video and display) Subscription Transaction (pay per view, rental) Advertiser funded programming Behavioural targeting Product placement <p>Who can monetise video content?</p> <ul style="list-style-type: none"> Commercial broadcasters Platform operators (e.g. Sky, Virgin) Rights holders (e.g. sports, live events) Social media companies (Facebook, Twitter, Zeebox) Global broadcasters and video aggregators (Hollywood studios, YouTube, Newspaper websites) Brands and Media Agencies Studios and production companies (e.g. Warner Bros, All3Media) Hardware (e.g. Samsung) 3rd Party Ad Networks (e.g. SmartClip, Videology)

access video from anywhere in the world, and able to display a picture that is being played or controlled from a smartphone.^{xii}

Smartphone and tablet penetration is growing at unprecedented rates: ten times the rate of PC adoption in the 1980s, twice as fast as the internet boom in the 1990s and three times faster than the recent uptake of social networking.^{xiii} This is creating a vast global market, based on common standards, with the current 1 billion smartphone subscribers trebling to 3 billion by 2017.^{xiv} These changes are revolutionary: by 2014 it is estimated that 50% of UK households will own a tablet device, and by 2020 there may be more than 60 million smartphones active in the UK. Each will be connected to the internet, and each will enable new ways for advertisers to engage with consumers. These devices are being used extensively, sometimes for up to 3 hours a day of web browsing and app usage, creating and amplifying new patterns in consumer behaviour.

Much of this behaviour is complimenting other activities such as watching TV. Recent surveys suggest that TV viewers who own smart devices are using them between 50 and 75% of the time that they are watching TV^{xv}. Around 60% of Facebook users watch TV while logged in via a second screen, and out of the 400 million daily UK tweets, 40% of those sent in peak are discussing TV shows.^{xvi} Usage is right across the age spectrum, with 50% of over 55's now using a so-called 'second screen' while watching TV.^{xvii} With this technology, parents are becoming like their kids rather than the other way around.

However, not all video being consumed on smartphones and tablets is related to TV. More than 40% of traffic to YouTube videos is now via a mobile device^{xviii}. And with 74% of TV viewers saying they regularly can't find anything they want to watch^{xix}, the amount of video consumed on new devices is only likely to rise.

These trends may create an important tipping point in the relationship between advertisers and media companies. To review why, we need to understand how each is responding to the opportunities and threats that are emerging.

Evolution and Revolution in Video Advertising

"We are not in the business of keeping media companies alive. We are in the business of connecting with consumers"

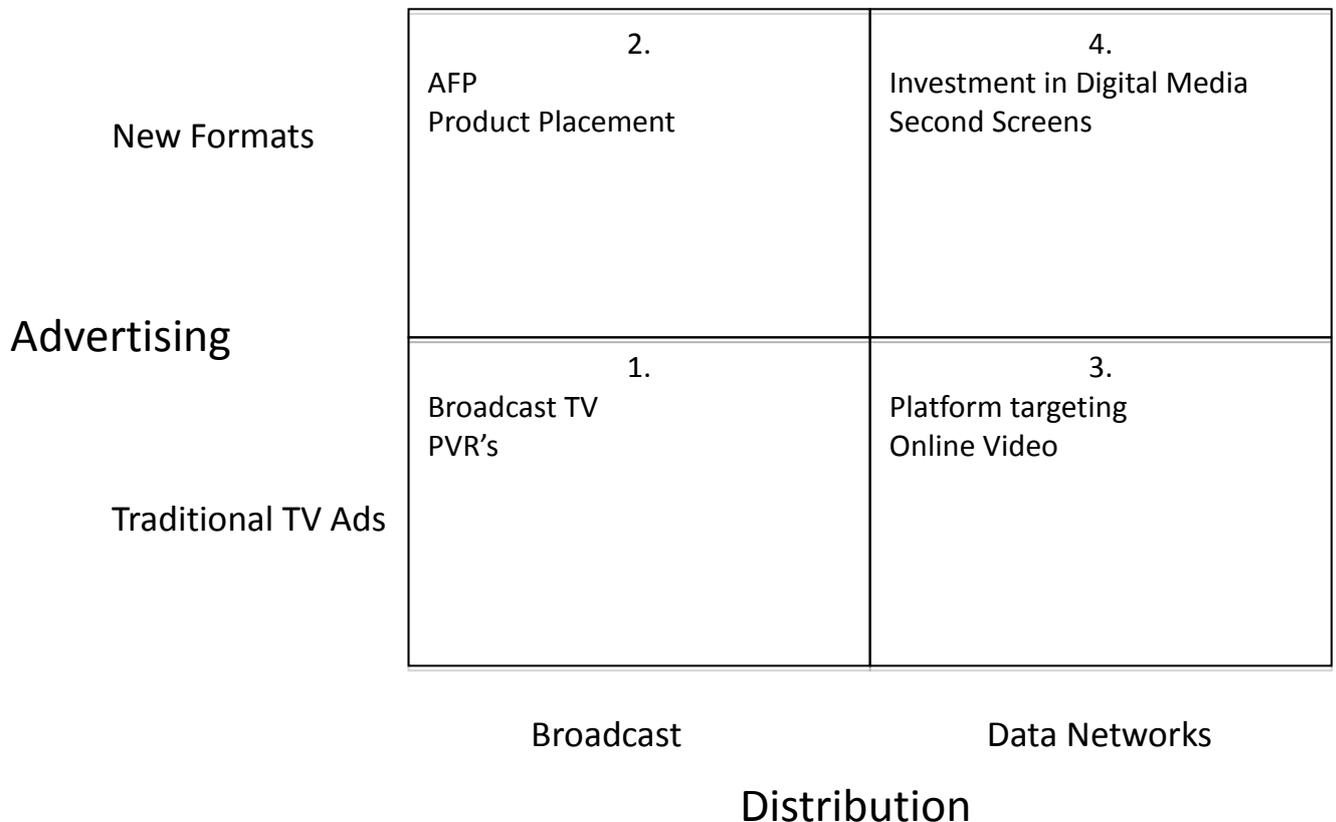
Trevor Edwards, VP Global Brand Management, Nike^{xx}

"Media companies and agencies would still like us to just create a load of TV spots. It'd be much easier for them, and frankly for us, if things still worked like that. But they don't"

Brand Manager, Global Consumer Brand

The Changing Routes to Monetisation

The diagram below summarises the new routes to audiences that are currently being explored by advertisers and agencies.



Along the bottom are the two main distribution channels for content: broadcast channels / platforms and data networks (primarily the internet). The vertical dimension is the advertising model: traditional TV 'spots' and sponsorship advertising placed around editorial

content, and new revenue streams that may arise from more new ad formats (such as product placement) or prompted viewer activity . This creates four main areas to discuss, outlined in the four boxes in the matrix. While many of the innovations we will discuss do not fit neatly into any one box, the matrix remains a helpful way of summarising the current trends in the industry.

We will discuss each of the four boxes in turn, highlighting illustrative case studies as we go.

1. Broadcast Content, Monetised through Traditional TV Ads

"Not surprisingly, in a space that offers sight, sound and motion, TV generates more profit per pound spent; the most efficient share of voice; the highest ROI."

Chris Locke, Starcom, at Thinkbox debate 2011

As previously discussed, traditional spot advertising remains the most important medium for major brands and their agencies. The available inventory continues to increase, and some interviewees suggested that it remains relatively cheap. But above all it is the context and scale of TV advertising that matters to brands and agencies. As one brand manager explained it to me: *"10 million people watching X Factor together on 42 inch screens has a much greater impact than 10 million people reached on different devices and services via the internet. Even if it was easy to reach that number at the same time online, their context and psychological mode is just different"*.

Most interviewees also confirmed that TV provides an appropriate level of targeting. The diversity of the schedule across multiple channels allows media planners to target the consumer segments they need with perceived confidence using measurable, consistent and auditable metrics. And while digital media enables targeting of consumers to a much more granular level, most brands and agencies remain lukewarm to targeted advertising and are relaxed that their adverts are being seen by consumers that won't buy their product. As one agency executive put it *"Every brand wants to be famous, and in some categories 'wastage' is an important objective of campaigns. If you want to sell luxury cars you have to make sure they're desirable beyond the tiny percentage of the population that will actually buy one. TV remains by far the best medium to do this. TV air time has never competed with direct mail, and it won't compete with highly targeted ads online"*. Other brands with equally targeted but less aspirational products (e.g. baby food) are content to buy the demographics they need while effectively getting other segments bundled in at little incremental cost.

The arrival of PVRs led to concerns about the scale and potential impact of timeshifted viewing. In practice, the evidence remains contradictory. Time shifted viewing is certainly a significant trend as PVR penetration increases. A brief analysis of BARB data for October 2012 suggests that there were more than 200 programmes broadcast in peak across the portfolios of ITV, Channel 4 and Channel 5 where at least 20% of the audience was not viewing live, and around 50 programmes where at least 40% was timeshifting (with more still via catchup services accessed on a PC or tablet).^{xxi} The potential revenue implications of this are a concern for broadcasters, as one executive commented: *“A significant percentage of viewing to some of our shows is time-shifted, so ad skipping is a threat to our revenue. If that behaviour grows and PVRs become ubiquitous, we may face a problem, especially in genres which don’t need to be viewed live”*. These concerns help explain the litigious reaction of the US networks to the “Hopper”, a PVR introduced by the Dish Network Corporation, which automatically skips the ads in recorded shows.^{xxii} However, consumer research indicates that ad skipping is less prevalent than expected. Research by Sarah Pearson at Actual Consumer Behaviour suggests that in PVR homes at least 80% of ads are watched at normal speed, reflecting the high level of residual live viewing^{xxiii}. And ThinkBox statistics reveal that the proportion of viewing of live vs PVR for the main commercial channels and their BBC equivalents are almost identical^{xxiv}. This suggests that viewers are not switching to PVR recordings to avoid watching ads.

Although the ability to further refine traditional TV spot advertising is constrained by regulation and technology, greater levels of targeting are on the way. Sky has been trialing its AdSmart service in half a million homes, and has announced that it is planning to roll out the service in 2013. This will create a base of 7 million homes, with 9 million Sky+ boxes that will be able to receive targeted spot advertising. Little public information has been released, and Sky declined the opportunity to discuss the service as part of this report. But from recent conference announcements it appears that detailed household level profiles will be created, covering 90 different attributes such as region, affluence, family status, life stage etc. These can come from Sky's own data sources, and commercial data providers such as Experian. Sky will then use these profiles in their trading of airtime with agencies, and target different ads to different households by downloading more than 200 different creatives into each set top box. This will mean that each household will effectively have their own ad server, ensuring they can get different ads in the same commercial break. Their aim is to create a new market in spot advertising, enabling advertisers who require greater targeting to access TV audiences for the first time. Industry commentators suggested that Virgin and YouView are believed to be working on similar technology.

It will be interesting to see how broadcasters respond to better targeting for TV spots. It offers them new opportunities, and potentially increases the value of the inventory they create. However it will require them to build new commercial and technical relationships with platform operators and this will inevitably create new costs and complexities. It also raises potentially sensitive issues around data ownership and consumer protection. And there is a delicate balance between increasing revenues from better targeting while decreasing revenues through less wastage.

How Brands Are Responding

There was universal agreement among interviewees that TV would remain essential to build brands via the iconic and creative adverts that capture industry awards and become part of the national conversation. There are many examples, but at the time of writing the best known are perhaps the John Lewis adverts at Christmas: powerful story telling that builds long term perceptions and value. These campaigns can take a year to produce, and require significant investment in both production and media planning. And, as we'll see, they are now exploited across multiple platforms, and use social media such as Facebook to start a dialogue with consumers and turn them into fans.

However, TV is also used for direct response adverts, typically found on daytime schedules. Their messages are more tactical, focusing on price, discounts, offers and transactions. Financial services are a strong investor in these, with insurance companies such as Swinton investing heavily in promotional campaigns to encourage consumers to switch their provider. The media planning strategy tends to be buying cheaply and at vast scale, an approach that one industry commentator said was becoming more common with major brand advertisers. TV will remain an important source of reach for these advertisers, but they are also advertise extensively online, in video and casual games, exploiting the better targeting, accountability and efficiency available from automated digital sales platforms and ad exchanges. As online grows, many industry stakeholders believe the migration of their budgets will accelerate.

2. Broadcast Content, Monetised through New Formats

"Conveying the essence of the brand in a 30 second spot has always been an uneasy fit. But in the past that's all we could buy. Now we want to own more than just the ad break...we want to own the programming"

UK Brand Manager

The monetisation of commercial television audiences has developed over the last two decades to include new opportunities such as sponsorship, advertiser funded programming and product placement. This has required successive waves of innovation by advertisers, agencies, producers and broadcasters. Progress has been, and is likely to remain, slow. But the primary reason for this is because of the difficulty of aligning the interests and objectives of the various commercial players. The regulatory environment is not perfect, but it is not the major obstacle to further growth in the market.

Aligning Commercial Interests

The overwhelming consensus from the interviews was that the main obstacle to innovation in this area was the difficulty in doing deals. The conflicting needs of brands, agencies, producers and broadcasters are proving difficult to align, and there doesn't appear to be a panacea that will solve the problem.

Integrating products, brands and their implicit values and stories into TV programmes is difficult for marketing departments. Their marketing objectives typically require reach and frequency for their adverts, so integration into single shows is hard to align with a media plan. Their campaigns are planned long in advance, making it hard to work with the more rapid and flexible requirements of producers and broadcasters. They also require obsessive levels of control for their brands identity and representation, and have highly detailed rules on what is appropriate. These rules are policed vigorously often by independent teams to create internal checks and balances. Sign off for campaigns and creative occurs at multiple layers within the organisation, and will often include board level authorisation and annual audits of compliance.

As one brand executive put it *"I am aware of the Ofcom guidelines, but frankly our marketing code is much stricter. The day I joined I was sat down in front of it, and it was made clear that any breach was an instantly sackable offence"*. This rigour in protecting brands is unsurprising given that many have been created over decades, and represent cumulative investment of billions of pounds. But it also makes brands risk averse and only willing to spend money on tried and trusted ideas, particularly when adverse feedback can become a firestorm on Facebook or Twitter within hours.

For most big advertising agencies, Product Placement and Advertiser Funded Programming (AFP) seem to be at best an interesting headache. The core of their business is to create and / or place engaging TV spots, and many lack the skills and relationships needed to successfully integrate their clients' brands into shows. Specialist agencies exist, but integrating their output into a holistic media plan requires specific effort and capabilities.

Content producers also struggle with AFP and product placement. As one producer put it to me *"I thought commissioning editors were risk averse until I started working with brands."*

Finding a genre where brand integration works is really hard. Then finding a show which will work at sufficient scale is then difficult. Finally, working with a brand team to meet their needs while creating a great show for the audience is almost impossible".

Finally, broadcasters' objectives add further obstacles. Their objectives are ratings, which in turn drive the channels share of commercial ad spots, which in turn will drive the overall revenue to the channel. So the only focus of a commissioner is whether the content is good, and therefore whether it will be watched. As one frustrated producer put it *"Commissioning editors don't care if the idea we're bringing them is funded, only if it's good. You'd think they'd be willing to take a cheaper show, and save some money for an expensive pet project. But it doesn't work like that".*

In some cases mentioned, the objectives and schedules of the brand and the broadcaster are mismatched. With the exception of major events such as the Olympics, broadcasters are unable to give advertisers the control and certainty they need for when their funded shows may be aired. Some brand managers have made herculean efforts to invest directly in content, or to experiment with product placement. In return they'd had expectations of when their content would be aired, and how this would integrate into their other marketing activities. But at the last moment, the broadcaster had changed the schedule and delayed payout, sometimes by months. As one CMO put it *"This AFP was a key part of a Q4 focused marketing campaign, but it now won't be broadcast until Q1 next year. Having the wrong messages in the wrong quarter is worse than just wasting the investment. Why would I do that again?"* In another case, a brand had been lined up to spend a seven figure sum on a package combining AFP and spot advertising to create six episodes for a peak time slot. With less than a month to go the broadcaster decided that they only had room for four episodes. Few brands can embrace that level of uncertainty and risk particularly when (as we'll see) alternative routes to audiences give them better control and accountability.

The difficulties of each protagonist are further complicated by the need to work together, and to create and share across new and unfamiliar deal structures where each party can claim to be bringing the lion's share of the value. Brands increasingly want control of content and direct relationships with key talent. Producers are perhaps best placed to arbitrate between brands, agencies and broadcasters, but are finding it hard to get broadcasters to share relationships and revenues in what could become precedent setting deals. Broadcast sales teams are keen on these deals in principle, but finding them hard to scale alongside a core operation that is focused on selling billions of potential TV spots. It is no surprise that many interviewees felt weary and wary:

- *"AFP is a nightmare"* Producer
- *"You'd think that product placement would be Mecca for us. But it's hell"* Producer

- *"We do them, but we're not set up to do them. We have to do them, because they change the conversation we have with agencies and show that there's growth in what we do. But sales and editorial are deliberately separate, they don't normally talk to each other"* Broadcaster
- *"We had the idea for integrating a product into the [lifestyle] show, and the talent was on board. It then took 20 presentations to agencies before we got a brand to agree. It then took months for their internal approvals. The deal was for less than six figures, and we then had to haggle with the broadcaster. But with commissioning budgets going down we have no choice but to soldier on"* Producer
- *"These deals are ball-achingly difficult, and I can't see them scaling"* Agency Exec

Most people I spoke to believed that these markets would develop. But many were also prioritising their investment and effort on easier routes to audiences and revenue that are rapidly opening up elsewhere.

Regulation: Overview

The regulation of commercial messaging on TV has always been treated differently to other media reflecting the reach, impact and intrusive nature of the adverts themselves. In particular, careful thought has been given to ensuring that editorial content and commercial messages are kept clearly distinct and appropriately signposted. In addition the amount of advertising inventory available has been carefully controlled to ensure a level playing field between broadcasters and an enjoyable experience for viewers.

Over many years, these frameworks have been progressively relaxed. Sponsorship and advertiser funding of programmes by brands was permitted in the 1991 Independent Television Commission Code and has grown slowly to become a significant revenue stream for broadcasters. More recently advertisers have explored directly funding programmes with placed references to brands and / or have ensured that their products are featured during shows. These regulatory changes have been lobbied for, and welcomed, by industry and as we'll see case studies are starting to emerge that are building the market. One expert who has a long overview of market developments is encouraged that product placement will develop steadily, and more rapidly than the sponsorship market did over the last decade.

However, successful integrations remain few and far between. While brokering deals and aligning interests remain the biggest constraints, the regulatory environment isn't perceived to be perfect either.

The first difficulty that interviewees highlighted derives from the responsibility of a broadcaster to ensure there's no conflict of interest between the distribution of TV shows and the monetisation of the audiences that watch them. The requirement to keep editorial

content and commercial communications clearly distinct is set out in European legislation and the Broadcasting Code, but it creates enormous difficulties for brands and agencies who are interested in funding shows.

Further difficulties remain because, for some, the guidelines for product placement into shows are perceived to be unclear, or are misunderstood. For product placement to unlock significant revenue the products need to be used prominently in the programme. For some, the guidelines on product placement are difficult to understand: as one brand manager stated *"I've read clause 13 of section 9 twenty five times, and I still don't understand it. I'd love to do more product placement in the UK, but frankly life's too short!"*

There were a number of comments from interviewees on what they perceived to be tighter restrictions on commercial messages on UK broadcast TV, compared with TV programmes originating in other countries and other UK non-broadcast media.

- *"Our viewers live in the real world. They drink Costa Coffee and fly on EasyJet. Not being able to name these brands decreases editorial legitimacy, and makes the content less engaging. And not being able to take money from them seems like a lost opportunity. Isn't this a lose-lose?" Broadcaster sales executive*
- *"I do find it hard to explain why we can state that the clothes that we're showing on air are available from retailers we name, but we can't take any money from them for doing it, even as part of a sponsorship deal outside the programme itself." Broadcaster sales executive*
- *"So let me get this right....a chocolate brand or breakfast cereal can sponsor the Olympics, can advertise on TV VOD services, but can only appear in a spot break after 9pm, and can never pay for integration into a show. Really?!" TV Producer*
- *"When the FT produces an ad funded supplement on Bahrain, it's very clear what it is. Why can't we do the same with airtime?" TV Producer*
- *"The codes are meant to align us with European regulation. So why do I have to explain to a German brand manager that he can't recreate a successful campaign in the UK?" UK based Brand Manager*
- *"Broadcasters are allowed to acquire shows from abroad that have a wider range of products integrated far more prominently than UK rules permit. As a UK producer that doesn't feel like a level playing field, nor will it help me learn how to compete abroad" UK Producer*

These comments reveal three different sets of issues concerning the perceptions and reality of the regulations.

First, it seems there are misunderstandings or misinterpretations of the rules, given that many of the examples cited would not be restricted under the Codes in the way implied.

Second, some of this misunderstanding may be because the principles and language of the Codes remain focused on broadcasters (and their compliance departments) not on the increasingly important perspectives of brand managers who ultimately control where money is spent.

Finally, they reveal that some industry players are questioning whether the Codes create an appropriately level playing field for UK broadcasters and producers. They are asking why UK TV commissions are governed by different regulations to overseas acquisitions; why the UK has a different implementation of EU regulation than other EU countries; and ultimately whether TV's unique restrictions should evolve so that it becomes closer to other media (particularly online).

How Brands Are Responding: UK Product Placement

Despite the difficulties and obstacles, progress is being made. Product placement is being included in new commissions, and successful case studies are appearing. These include a successful integration of Xbox into A League of Their Own on Sky 1, where the product was used by key talent as part of the show, and Tresemmé integrating into Britain and Ireland's Next Top Model via sponsorship, product integration and spot advertising.^{xxv} Uncle Ben's Rice and Yeo Valley Yoghurt have been integrated into a new Jamie Oliver series on Channel 4 in a deal which saw on-pack offers to tie in with the show.^{xxvi}

Product placement may get a further boost from digital technology. Digital agencies such as MirriAd have developed technology that can identify opportunities for product placement in shows that can be either finished or still in production, and then digitally insert the relevant products or logos into the video. A music video set in a cafe can have branded drinks bottles digitally inserted onto the shelves, or a drama scene can have digital advertising inserted onto billboards and particular brands of cars parked on the street. In one recent deal the PG Tips logo was digitally integrated onto the mugs used by contestants on Deal or No Deal on Channel 4: the mugs themselves were blank, and the opportunity can therefore be sold to a different brand on a future occasion.^{xxvii}

Digital insertion of products has numerous advantages. It empowers brand managers, producers and broadcasters because any decision to include a particular product can be altered or reversed. It can be done at scale: hundreds of hours of video content can be scanned quickly for relevant opportunities. It provides a flexible approach: products can be replaced or adjusted by territory, or after a particular period of time. And finally it provides metrics that give confidence to brands, and provide objective measures on prominence to ensure compliance with regulation.

This technology is robust and available, and is in the early stages of commercial deployment. Music labels and major studios are particularly interested in using it to monetise content that will be subsequently distributed via online distribution (e.g. YouTube) or sold to national broadcasters. Whether this will complement or cannibalise existing advertising revenue streams remains to be seen.

How Brands Are Responding: Ad Funded Content with related activity outside of TV

Elsewhere, at the margins of the schedule, new funding models are emerging where brands are investing directly into content that is not initially aimed at broadcast distribution. Documentary producers are blazing a trail here, with high budget productions such as *The End of the Line* attracting material investment from Waitrose, ensuring that it had significant distribution through cinemas and exposure online. In return Waitrose gained end credits, and the chance to incorporate the film's core messages with their own marketing activities. It was only after the film had already built an audience and profile that it was broadcast on TV, garnering further attention to Waitrose. Their sales of sustainable fish rose by 15% in a campaign seen as much more effective than the equivalent TV spend would have been.

One interesting recent development is that agencies such as Group M are investing in the skills and capabilities to create ad funded content. While Group M Entertainment was unwilling to discuss their strategy as part of this project, their recently announced deals include investing in a drama series for ITV and factual shows for Channel 5 and ITV2.^{xxviii} While the commercial terms for these shows remain confidential, it seems possible that Group M and its clients benefit from hybrid commercial deals with the commissioning broadcaster. In addition, Group M uses its global network to help drive the sale of secondary rights outside their home market. It remains to be seen if agencies can build and retain the skills needed to create great TV shows, but Group M's ambition to do so is clear.^{xxix}

3. TV Spot Adverts, Delivered via Data Networks

"Anyone can be a content producer and distributor; they don't need gatekeepers"

Jess Search, CEO BritDoc quoted in Marketing Week^{xxx}

"By avoiding television, brands can side step the complex regulatory landscape of broadcasting, which prohibits how companies can become involved in editorial content"

Editorial Comment in Marketing Week^{xxxi}

In recent years video content has been freed from the constraints of broadcast distribution, and its availability and consumption is now proliferating on new platforms and networks that are fuelled by data.

For our purposes there are two categories of content that are important: platform targeting and online video.

Platform Targeting

The majority of primary television sets in the UK already have the capability to receive, store and play adverts provided by the platform operator independently of any broadcaster, and independent of broadcast advertising codes. By 2020, through YouView, smart TV's and other connected devices, it is a fair supposition that the vast majority of UK televisions will have this capability.

We've already seen how Sky will roll out a service that stores and serves ads from the hard drive in its set top boxes. Virgin Media are also running trials using the advanced capabilities of their TiVo boxes. In one recent example, HTC complemented a compelling TV ad with the ability for Virgin customers to download an app that contained extensive behind the scenes footage and more information about the phone. The campaign was a success, with an average dwell time of 18 minutes, and many lessons learned. As HTC's UK head of marketing recently commented:

"With a piece of branded advertising in an online environment you'll be lucky to get 60 seconds dwell time....the next stage will perhaps be to start driving people to our branded content areas - like a TV broadcaster would drive people to its shows"^{xxxii}

For Virgin HTC's trial followed others with Gillette, Blackberry, Dreams and Honda, and points the way forward for their relationship with consumers and advertisers:

"The HTC campaign is a shining example of where branded content could go. People are happy to give their attention as long as there is a clear value exchange....the content must look, smell and feel like content not advertising. [We're certainly thinking about]...leveraging the behaviour and viewer data to provide more personal advertising...but the way we approach things has to be customer-first"^{xxxiii}

This last comment is a telling one: platforms treat their consumers with the same respect as major consumer brands, and are averse to innovation which might undermine long term trust and revenue. This hasn't always proved as true for broadcasters.

Online Video

Online video monetised through spot advertising is already worth £100m a year in the UK, and is growing rapidly. For our purposes there are three main types of content that are monetised: UK broadcaster Video On Demand (VOD), premium publishers, and YouTube channels. Each is creating new opportunities for advertisers to reach audiences. And, given the nature of the internet, the divisions between each category are porous.

Online Video: Broadcaster VOD

Each of the main broadcasters now offer VOD services along side their broadcast channels, including: ITVPlayer, 4oD, Demand5, SkyGo, NowTV, UKTV. These services are increasingly available across multiple devices and platforms, including on the main TV screen via Sky, Virgin and YouView. They also enable targeted advertising by requiring registration of their users and behavioural tracking, providing data on individual viewers and households that can be amalgamated with other sources of data from suppliers such as Experian. And they are increasingly building audiences at scale: 4oD is likely to stream half a billion ad funded programmes this year, and Sky Go recently enjoyed a live audience of 700,000 watching the Ryder Cup via mobile devices.^{xxxiv}

Online Video: Premium Publishers

Other publishers are also acquiring and distributing video content. Both TalkTalk and BT will be delivering ad supported content via the YouView platform, with BT in particular investing heavily in live sport which it will make available IPTV. The major newspapers are making aggressive entries into the market, with extensive video content ranging from live operas streamed by the Guardian to the Daily Mail's investment in digital video bureaux based in New York and Los Angeles.^{xxxv} Ad supported movie services such as Viewster are offering thousands of movies on demand. Yahoo! has been delivering online highlights to the Premier League, and is syndicating the content widely to others, although this content will pass to News International from the start of next season.^{xxxvi} Content owners ranging from London Fashion Week to indie bands are streaming live shows via the web, working in partnership with major brands. And producers such as Fremantle and All3Media are distributing the clips of their UK TV shows to global publishers, often via intermediary distributors such as Base79 and Rightster.

YouTube Channels

*"If that moment where he jumps out isn't one of the best pieces of live tv I don't what is.
Wait a second, I didn't watch it on live tv"*

Evan Davies, tweeting about YouTube's coverage of Felix Baumgartner

YouTube has also announced an ambitious strategy to invest in premium content. Having achieved a strong position globally, it launched local sales operations in 46 countries. It is now building local content operations in the US, UK, France and Germany with more to follow. Its strategy, as outlined by their content head Robert Kyncl, is clear: *"We need to be in the audience business, just like cable TV 30 years ago. And for that we need premium content and premium advertisers"*^{xxxvii}

YouTube thinks very differently about video content. For them, long form content is anything over 30 seconds in length. A successful channel is one that has more than 1 million views per week. And an attractive producer for YouTube is not just one that has content, but also one that can generate its own audience, and who has a deep understanding of how to use data analysis to identify what is worth producing. As one producer commented to me *"Broadcasters take the attention of their viewers almost for granted. YouTube knows that their content has to earn its attention. And that's a more resilient approach in a world of increasing bandwidth and choice"*.

While a digital platform may be content to offer a few hundred channels, YouTube is aiming to offer tens of thousands in every conceivable niche. Their monetisation model is different too. By aggregating audiences across dozens of territories and thousands of channels they can offer advertising opportunities across a myriad of highly targeted niches. They can offer a global audience of tens of millions watching channels of TV clips, news clips from the ITN archive, cartoons, sport, fashion, or music videos. They have already built some giant content channels such as Maker Studios, viewed by a UK audience of 5.8m visitors a month^{xxxviii}. Machinima, which targets a male audience aged 18-34 is now viewed 3.5 billion times a month by a global audience of 200m (5.3m of them in the UK), and is now large enough to commission its own shows in partnership with brands such as Motorola.^{xxxix}

They are also enabling major producers such as All3Media and Fremantle to operate their first audience facing services across dozens of bespoke channels. They are hosting ground breaking live events, such as Felix Baumgartner's descent from the edge of space. And they are helping fledgling producers find an audience for the first time. One particularly interesting example of this is PixieWoo: two make up artists from Ipswich who now have more than 750,000 subscribers on YouTube, and their 500 videos have been watched more than 134 million times. A US equivalent, Michelle Phan, now regularly has a larger audience for her videos than similar content would generate via broadcast television.

Finally, YouTube's ability to build a global franchise at speed was demonstrated by last year's craze for Gangnam Style, the first YouTube video to hit a billion views. As their product head tweeted: *"Most popular YouTube video of all time is a Korean musician whom none of us had heard about six months ago, and unsupported by US record industry.....never before has the world been able to watch video together. IMHO a profound change to the*

economics, distribution and culture of media"^{xi} YouTube has since announced that it has earned \$8m from the distribution of Gangnam Style.^{xii}

These are early days, but few doubt YouTube's ambition in building up significant audiences. The new CEO of Conde-Nast, speaking at the MIP conference, made a direct comparison between YouTube's nascent global channels and the early days of cable TV. *"Vevo is the new MTV, Funny Or Die the new Comedy Central; Jack The Movie Guy is the new E! Network and Machinima is the new ZDTV. Don't forget that ESPN started with four guys with headphones on watching TV: YouTube channels are starting with other people's content, and simple commissioned shows. But they will move up the scale rapidly. Content catered to very few Americans in the early days of broadcast, then cable came along and produced content for 350 million people. Today you're producing for 2.5 billion"*^{xiii}. One UK producer made a similar point: *"I have no doubt that YouTube will bid for the premier league rights. I just don't know if it's in five years time, or twenty five"*.

Given all of the above it is less surprising that YouTube claims to be generating greater revenues per viewer hour with ads than cable channels in the US^{xliii}, achieved in part by taking TV budgets away from broadcasters.

How are brands responding: Advertising on IP Delivered Premium Video

Advertising on VOD services allows brands and agencies to use creative used for television, but deploy it in very new ways. This creates significant new opportunities for both advertisers and agencies.

First, the regulatory regime is lighter with no ad minutage restrictions and more relaxed rules on programme sponsorship.

Targeting is also easier, enabling highly focused media plans that are restricted to certain consumer segments and / or capped when individual consumers have seen the relevant ads a prescribed number of times.

Technology is enabling rapid innovation in the types of adverts that can be delivered. YouTube has long offered the ability to skip an ad if you don't want to watch it, and uses this data both to improve its relationship with advertisers (it doesn't charge for ads that aren't watched) and with users (it serves different versions of the ad to unresponsive viewers). 4oD is also a pioneer here recently announcing a suite of ad formats for online video that include the ability to select ads, interact with them, trigger video microsites, share them on social media, pause or extend them, and directly link out of the ad into an ecommerce transaction. Companies such as InSkin Media are creating new ad formats that allow brands to immerse viewers in their logo and messaging, alongside other content. Webpages, video players and individual videos can be quickly and easily customised to have sponsorship

messaging and calls to action prominently displayed, and synched with second screens. Given the rise of connected televisions that can deliver online ads into broadcast channels, it won't be long before advertisers and users crave this functionality direct from broadcasters, who would struggle to deliver it given existing regulation.

Technology is also creating new opportunities in media planning. Online profiling companies such as Quantcast now have detailed profiles representing the vast majority of UK online users which can be used by planners for targeting. Digital start ups such as Impossible Software are enabling video adverts to be created dynamically, i.e. in real time, to be tailored to the profile of an individual viewer enabling millions of variations of the same video advert based on the location, time of day, demographic profile and behavioural history. Other technology companies such as Unicorn Media are able to reversion adverts to optimise them for thousands of different combinations of screen, platform, bandwidth and operating system. Demand Side Platforms (DSP's) are enabling the real time trading of inventory, with advertisers able to specify the precise audience they want to buy and the price they are willing to spend. And dozens of online video networks such as Videology and SmartClip are providing the infrastructure and the inventory to enable agencies and brands to deliver and track targeted adverts to aggregated audiences at a global, regional, national or local level. One important consequence of these new technologies is that an individual ad break might be sold by half a dozen different sales teams including the content owner, publisher, media agencies and multiple online ad sales networks. The ads themselves may then be served and tracked from multiple sources and territories. So while the advertising creative might look familiar, the underlying technology, business model and industrial ecosystem is completely different and much more dynamic^{xliv}. It is scaling fast, and already co-exists on the same screens as broadcast television advertising. And it is creating a landscape for video advertising that looks very different from television. Comscore's current video metrix suggests that out of the top 50 online properties and networks that serve video ads to UK audiences only 6 are UK owned media properties, and their combined share of video ads served represents only 8% of the total market.^{xlv}

How Brands Are Responding: Content Creation and Sponsorship

One of the many opportunities for brands online is to re-invent how sponsorship works, bypassing many of the restrictions that are contained in the Broadcasting Code, the BCAP Code and ATVOD guidelines. P&G's relationship with Yahoo! and YouTube around football are interesting cases in point.

In an extensive partnership that has recently gone live Gillette is acquiring content from 150 European YouTube channels including those of individual football clubs (Manchester United and Chelsea) and both broadcasters and national leagues. None of this content is commissioned or created by Gillette, although it is supplemented by entertainment and

analysis shows created by a UK TV production company and will be further enhanced with social gaming and statistics. Gillette is effectively a curator of content from elsewhere on YouTube, enabling fans to create their own personalised channels of relevant content tailored to each user's preferences. This is a strategic investment in a new channel, not merely corporate R&D. As Gillette's VP of E Business put it:

"We define the task of building brands as trying to establish lifelong, one to one, real time relationships with every single consumer in the world. P&G has previously talked about digital or mobile as new activities, we're now talking about branding building in a digital world. The number one priority for our marketers is to build the best brand in a world that is digitally connected, in a way that wasn't possible before"^{xlvi}

As part of its content strategy, YouTube is therefore not only providing the platform for producers to reach new audiences, but also for brands and advertisers to curate their own packages of content and engage both individual consumers and mass audiences of millions.

4. New Formats, Delivered via Data Networks

"We are moving to a world in which everybody has a smartphone or tablet, and mobile is 'prime time all the time'. Free to air television is not the first thing they do when they get a smartphone, and it will remain a minority source of entertainment and information on the device. And we need to fish where the fish are"

Agency Executive

The final category is the most dynamic and nascent of all: using online media to build new relationships between brands, media companies and audiences. This is being done in two main ways: investment in digital media, and investment in second screens.

Investment in Digital Media

Some brands have become so effective and successful at using online media that they it is becoming core to their business and core to their relationship with consumers.

Some have started to recognise the value of the audiences they now command themselves. One electronics company did this recently in Europe looking at the media value of their own properties (e.g. websites, and the home-screens of the devices they make). They found their own 'inventory' would cost them in excess of 100m Euros p.a. if they had to purchase it. This perspective has changed the way they think about their own properties, and their ability to cost effectively market to existing customers.

Other brands are using online distribution of content to help create and re-enforce relationships with consumers. Burberry is one such brand that has been successfully re-invented, largely without the use of TV advertising. Instead, Burberry has invested heavily in product and retail innovation, and online content. Most recently, Burberry has been connecting consumers to its brand via Burberry Acoustic: an online showcase of emerging and indie music talent. This features prominently on its website, and helps fuel its highly successful Facebook page where it currently has 14 million global fans.

Red Bull meanwhile has become a content powerhouse with a substantial catalogue of TV shows which it distributes at MIP. As one interviewee at an agency put it, *"Red Bull has morphed from being a soft drinks company that made clever content into a media company that happens to sell soft drinks"*. It has a portfolio of live sport, it is aggressively investing in high profile global events such as Felix Baumgartner's recent jump, and is now co-producing movies. As one producer commented *"Red Bull now has an engaged audience of 35 million via its Facebook page. It is creating content for that audience, from sports events to action movies. It is not interested in creating 'advertising', but in finding the right content to associate its brand with, or embed its messaging in. And its strategy is driven by the creativity and whimsical ambition of a few individuals, and hard nosed business"*.

Finally, Jamie Oliver's new YouTube channel (FoodTube) shows how new technology can create new ways for talent and brands to engage viewers directly. Within two weeks of its re-launch his channel now has over 140,000 subscribers and 13 million video views, and user comments are being answered on a daily basis. His introductory video neatly summarises the ambitions for the site, and how it could evolve as a significant media property in its own right:

"This is Jamie Oliver's Food Tube, on YouTube. This is the place you can get loads of my uncut stuff.... behind the scenes...tutorials, plus new and fresh talent, and of course master classes. Also we're going to do live shows from where ever takes my fancy, because it's my channel. I can do what I want, when I want. It's going to be a brilliant community, and foodie heaven. All you've got to do is subscribe....it costs no money...and we will look after you"

Jamie Oliver's production company already has experience of product placement into his TV shows. But going online gives them control of content, scheduling and commercial partnerships as well as access to a global audience and a less restrictive regulatory regime.

Monetising Second Screens

RedBee's recent survey of UK smart device users has provided useful insights on how second screens are being used while viewers are watching TV^{xlvii}. It is no surprise that they are being used for a wide variety of uses. Over 80% of users are emailing, or browsing the

internet, and 70% are completing ecommerce transactions or using Facebook. However around half the audience are using their screens to enhance their viewing experience:

- More than 50% find out more about the TV show they're watching, and would be willing to engage with an app that is connected to the show
- More than 40% research a brand or advert they've recently seen
- The majority were open to targeted advertising on their second screen, and would like to receive targeted adverts based on the ads they'd seen on TV

Second screens therefore offer powerful opportunities for broadcasters and brands to engage with audiences who are watching TV. For the first time live broadcasts of TV shows can be directly monetised through advertising in ways that circumvent the constraints of broadcast technology and regulation.

Shazam is a UK based company whose app is installed on 250 million smartphones, and which can be used to identify soundtracks and music that are being played nearby. In its most recent initiative, Shazam has begun to index 160 television channels in the US. By matching the audio of these channels with the audio captured on viewers' devices it should know which of its 80 million users are watching which channel, in real time.^{xlviii} It is also including inaudible codes to be broadcast via TV spots, which will activate the app on a viewers device. This has many possible applications, not least of which is the ability to provide more information, or promotional offers, to viewers of broadcast TV. The first Shazam enabled ad was broadcast by ITV in the summer of 2012, enabling viewers to win tickets to concerts or the Olympics. In the recent Superbowl Shazam was used millions of times to link viewers to around half of the adverts shown.^{xlix}

Zeebox is another good example of a disruptive use of second screen technology that is being deployed in partnership with broadcasters to create a new market. Zeebox is indexing UK broadcast content (including adverts) in real time, and tagging the content with data¹. Zeebox users download an app onto their smart device and are then able to enhance their viewing experience with real time information, data and social media about the show they're watching. This creates new and powerful opportunities for advertisers and broadcasters:

- They can target ads and commercial offers such as coupons, offers and competitions to individuals using the Zeebox app, in parallel with the show. This is a powerful direct response mechanic that can turn viewers into instantaneous customers.
- They can send messages to viewers of other channels in real time. This could include sending targeted adverts to viewers watching another channel (including the BBC), and / or promoting their schedule to encourage viewers to switch.

Technology such as this can, in theory, also improve the targeting of the ads being shown on the broadcast channel. For the first time, broadcasters will know who is watching their shows across a huge sample of the viewing population, down to individual viewers. Serving targeted and bespoke advertising to them via the main broadcast channel in real time is now a problem that technology can solve.

5. Blurring the Boundaries: Coca Cola

The borders between the different categories of commercial messaging are becoming harder to delineate as technology platforms converge. The framework's four boxes are therefore helpful in simplifying the various types of content, but simplistic in ignoring the connections between them.

Our final case study therefore looks across all four, from a brand's point of view.

In a recent article for the Harvard Business Review, the Chief Marketing Officer of Coca Cola neatly summarised the new thinking that is being undertaken by many leading brands.

"A lot of us remember when the role of the CMO was much simpler. Information flowed in one direction: from companies to consumers. When we drew up our plans and budgets, the key metric was consumer impressions: how many people would see, hear or read our ad? Now information flows in many directions, consumer touch points have multiplied and the old one size fits all approach has given way to precision marketing and one to one communication. Consumers have become empowered to create their own content about our brands and share it through their networks and beyond....consumer engagement is ultimately what we're striving to achieve. Awareness (i.e. from TV commercials) is fine, but advocacy will take your business to the next level"

Joe Tripodi, Chief Marketing and Commercial Officer, Coca-Cola

Their Vice President of Global Advertising Strategy, Jonathan Mildenhall, is the architect of their new approach. As he puts it:

"The media landscape is a very different beast than it was even 5 years ago. Then, agency led television commercials dominated how we channel our marketing. Coke will leverage the opportunities in the new media landscape and transform one-way storytelling into dynamic storytelling, ensuring every contact point with a customer should tell an emotional story"

The new strategy invests in content that is *Liquid and Linked*: Liquid content is about "creating ideas that are so contagious that they cannot be controlled, and so compelling, authentic and culturally relevant that they can flow through any medium". Linked content is content that is linked to brand strategies and business objectives. The content that Coke produces leads to consumer conversations, which Coke now needs to curate and react to

365 days a year. And the creative ideas will disproportionately come from consumers themselves, and be indistinguishably connected to the technology that's enabled them.

So Coke's approach is evolving beyond just raising awareness through traditional media campaigns. They are focused on creating culturally relevant ideas, and engaging consumers by amplifying them through any relevant distribution channel. This approach is proliferating the amount of content Coke produces. For the Beijing Olympics they created three TV spots and six outdoor ads. For London 2012 they created more than 120 different pieces of content, including a massive music event that could be an AFP TV show or reversioned into 30 second TV spots of clips for viral distribution on YouTube and Facebook.

Coke are therefore thinking holistically about how to use every touch point, media plan and relationship to engage with consumers. They are creating new partnerships with global technology and media companies such as Facebook, Google and Microsoft. TV advertising remains vitally important and they rely on the mass audiences created in peak time to create engaging brand stories and memories with consumers. But it is now only part of what they do, and it seems likely that innovation and budget will migrate over time.

Conclusion

"The old model of advertising was about engaging consumers to push them down the sales funnel. The new model is about combining engagement, transactions and recommendations, all underpinned by data"

Cindy Gallop, ex chair of BBH in New York^{li}

"When I started my career as a media planner we bought TV airtime because it was all there was to buy. Now you can target an audience of 20 year old women, in Suffolk, who bought a product like yours in the last thirty days, and you can serve an ad only to them and at a time and context of your choosing"

Media Agency Executive

In concluding this section, several trends are clear.

Brands are increasingly able and willing to find new routes to engaging consumers via IP connected devices and networks. These new routes are creating a wide range of new opportunities to improve the effectiveness and efficiency of their commercial communications in two broad areas. Big 'experiential' brands like Coke are becoming media companies in their own right, engaging consumers with content across multiple platforms and going beyond traditional 'interruptive' advertising to embed their brand's essence directly into the content.

Meanwhile direct response advertisers can improve the efficiency and effectiveness of their promotions via the targeting and automated trading of online advertising. Both types of advertiser now have the ability to create compelling advertising, embedded into content, linked to transactional platforms and social media across multiple platforms, but this activity is in a parallel universe to the hermetically sealed and highly regulated UK market of TV spots and sponsorship.

What's unclear is whether these commercial environments will co-exist, merge or be subsumed. This will partly be determined by the evolution of the regulatory frameworks in the UK, and the actions of global players in markets outside the UK.

Implications for Regulators

The interviews that this report summarises were not designed to generate recommendations for regulatory change, but some interviewees wanted to comment on the effectiveness and appropriateness of existing regulations. In addition, I have included some additional thoughts on how Ofcom could monitor developments in this dynamic market in the future.

Regulation: First, Do No Harm

The overwhelming sense from the discussions is that regulators should steer well clear of urgent or wholesale change. This is for three main reasons.

First, the existing checks and balances in the system are more than enough. The existing Codes, enforced by the regulatory bodies in BCAP, the ASA, ATVOD and Ofcom, and standard consumer regulation provide layers of protection, and an enforcement regime that is working. The rigorous and detailed safeguards of consumer facing businesses such as brands and media platforms also inhibit commercial messaging that is too aggressive. Brand managers admit that things can go wrong, but point to their detailed internal guidelines and compliance processes. And platform operators constantly reminded me that their business is driven by consumer subscriptions which they would be crazy to jeopardise through aggressive monetisation and intrusive advertising that abuses consumer trust.

Second, consumers are leading the change, and are providing a new and powerful check and balance on brands and commercial communications. As one advertising executive put it to me:

“Regulatory referral is damaging, but it takes ages for the wheels to turn. And while a damaging ruling is bad, it's limited compared to being held to account on Twitter if we get something wrong”

Finally, although innovation in many areas is well beyond R&D, it remains comparatively small in impact and fragile in nature. In a market where the majority of Apple's revenues are from products which didn't exist 5 years ago, there is a real risk of well-intentioned regulation stifling innovation. As one digital producer put it *“innovating is hard, and the last thing we need is a regulator wading in trying to fix things, or second guessing a rapidly changing globalised market”*.

Regulations to Review

While no-one wants more regulation there was a strong body of opinion that more could be done to enable appropriate innovation, particularly in product placement.

Two sets of observations were put to me by interviewees.

Product Placement and AFP

The first concerns the rules governing product placement and AFP. One UK based TV producer was blunt:

"Why do we make it so hard for ourselves? Good UK originated content is not being made because fewer spots are being bought and brands have other opportunities in the UK, and overseas. And good UK producers are not building the capabilities and formats that will enable them to compete globally. "

The specific point made by many is that the Codes are being misunderstood or misinterpreted. In part this reflects the different, and increasingly important needs of brands who may be affected by regulation, without being directly accountable for compliance to the regulator. Whereas broadcasters are used to Codes that define what they are allowed to do, brands prefer the certainty of knowing what they are forbidden from doing. As one brand executive put it:

"Ofcom has a tendency to produce well intentioned guidelines on what's acceptable, and then leave it to industry to work it out for themselves. It would be much better if it offered clear, and ideally measurable, examples of what is unacceptable. The current guidelines are a fig-leaf, allowing Ofcom to have its cake and eat it. But the resulting uncertainty, unnecessary red tape and perceived consequences of censure are corrosive."

There is also a perception that Ofcom may need to adjust its perspective. As one broadcaster put it:

"I recognise that Ofcom has many different stakeholders to balance, but in the end a regulator is there to control and prevent rather than to enable, and this is reflected in their regulation of TV advertising. And it's important to recognise that different attitudes exist for non-compliance. Criticism for taking editorial risks can sometimes be a badge of honour for a broadcaster because it's usually done on behalf of the audience. But criticism for breaching commercial guidelines always hits hard, because the perception is we're exploiting."

In one interesting discussion, a UK producer suggested that Ofcom should be proactive in encouraging innovation, and creating a regulatory regime where appropriate risk taking is encouraged and where industry practitioners can share best practice:

"I wonder if Ofcom could help lead the industry. Could they get their support from their stakeholders for a controlled loosening of the compliance regime, recognising that mistakes will be made, forgiveness will be needed but lessons will be learned? And are they set up

right to help broker relationships between industry players, and encourage the sharing of best (and worst) practice? Could they encourage broadcasters, particularly Channel 4, to be more ambitious in their approach to product placement and AFP?"

The final recommendation was to keep a watching brief on HFSS, and relax the regulations if it becomes politically acceptable to do so. As one broadcaster sales executive put it:

"HFSS are the key to unlocking growth in the product placement market. Most breakfast cereals are HFSS. I can understand why they've been banned, but this ruling is holding back the market and will become increasingly inappropriate as more content is consumed online"

Digital Content Regulation

It seems inevitable that significant thought needs to be given to the regulation governing digital video content that is "TV Like" as defined in European legislation. The ATVOD code has been a valuable stepping stone into a new era of services, but industry interviewees were doubtful that its definitions could stretch to cover existing let alone future innovation. As one ATVOD compliant digital distributor put it:

"ATVOD is defined as covering TV-like services, and was necessary at the time. But it will increasingly become unworkable. The definition of TV like services will become harder and harder to maintain as content categories blur and services are consumed on multiple screens. And its framework and implementation won't scale to 30,000 channels of live and near live content delivered to UK consumers"

Some interviewees highlighted existing edge cases to test whether the ATVOD approach was robust and comprehensible. A UK based digital entrepreneur explained his confusion:

"Which of the following is currently covered by ATVOD codes: a clip of Channel 4 content posted by an indie on YouTube; a live stream of a concert from the Festival Hall on the Guardian's website; the same content streamed from Channel4.com; live football coverage of UK league game streamed online; Downton Abbey embedded in a downloadable app; X Factor behind the scenes footage, distributed from Facebook; the same content promoted on air by ITV, and streamed from ITV.com. A live stream of cat walk shows from London Fashion Week distributed on a brand's website, or on Sky Go. I don't know the answer as to which ones are, nor (more importantly) if any should be"

Another identified that opting out of ATVOD remained comparatively easy:

"I'm aware of the ATVOD code, and we're compliant when we need to be. But my business is about serving video into 120 countries. If UK regulation becomes too onerous to comply with we'll simply shift our operations to our US office"

There was a general consensus from everyone involved in digital video content production or distribution that the frameworks governing non-broadcast video content need to be rethought.

Trends to be Monitored

Most of the people I interviewed had both awareness of and respect for the analysis that Ofcom undertakes to understand developments in the industry. However, Ofcom will need to develop new capabilities and relationships to assess the importance and implications of the accelerating changes in technology, business models and consumer behavior. This is because while overall viewing and revenues look robust, a lot is happening below the surface. Ofcom needs to identify and monitor a new set of leading indicators (or “*canaries in the coal-mine*” as one digital analyst put it) and this will require engaging with experts and perspectives from outside Ofcom’s normal circle.

Advertising Revenues

First, it will be important to get a more granular understanding of where marketing budgets are being spent, both by medium and by type of advertising.

The consensus opinion of interviewees was that direct response advertising would increasingly migrate to data networks, where targeting and trading efficiencies could be maximised. Meanwhile brand advertising will remain anchored to television, but only as part of a holistic approach to engaging consumers with a variety of content and messaging across every available channel.

If these hypotheses are right then it could have a significant impact on the revenues available for commercial broadcasters, and this in turn would affect their ability to invest in content. In addition, it would increase the advertising and innovation in non-broadcast, less regulated media with potential consequences for consumer protection.

Unless new metrics are established and tracked it will be difficult to assess whether these trends are material.

Viewing by Content Type

As part of the preparation for the interviews I reviewed the existing forecasts for non-linear viewing to 2020, including discussions with experts at Ofcom and research presentations from leading industry analysts.

They shared a broad consensus on the proportion of viewing that would be time shifted or on-demand, and most had cross referenced this with analysis of online video consumption on YouTube and other sites.

However, none appeared to have dug much below the surface of the numbers. In an environment where any content can be consumed at any time, what is the natural level of 'live' viewing. Which content deserves to be live, and which could be consumed later? How do these patterns vary between audience segments, and device types, and are these patterns changing over time?

Given the technology shifts that are underway, it seems highly likely that video content will fragment into a variety of time based categories. For simplicity, I'll highlight three:

- Live: appointment to view content, often shared with others (e.g. Sport, Soaps)
- Fresh: time sensitive content that has the equivalent of a sell by date (ought to be seen in the first 24 hours after broadcast, and up to 7 days)
- Everything else: content that can be first consumed at the viewer's convenience, much like a movie, album or book

Currently all three of these categories are spread across the live, near live and on demand services of the broadcasters. But as on demand services proliferate, and new non-broadcast aggregators such as BT, Apple, Google, NetFlix and LoveFILM get stronger, and look to acquire or commission exclusive content, how will viewing patterns change? And what impact will that have on broadcasters, and their ability to create the reach and impact required by advertisers?

Capabilities and Relationships to Build

Most interviewees welcomed this study because it indicates that Ofcom are keen to learn more about the changes in advertising that are underway. However, they believe that this should be the start of a process. The following quotes are representative of comments I got from across a wide range of interviewees:

"It's great that this study is happening. Ofcom has real depth in understanding broadcasting and content, but it's got far less experience in digital and advertising."

"Ofcom's research is great, but their scenario planning tends to stop once they've reassured themselves that the status quo will continue a bit longer. Who challenges the self referential thinking? It needs new DNA in its staff and advisers"

"Ofcom has the same challenge that brands, agencies and broadcasters have: how do you evolve and bring in new perspectives? Its Content Board reflects its broadcasting heritage. Shouldn't it have an advisory board focused on Digital and Advertising too?"

Finally, regulators such as Ofcom need to be actively building new relationships across the industry. Particularly with brands and agencies:

"Ofcom needs to follow the money, and that lies with brands. It is brands that will ultimately determine how they communicate with consumers. They are following their customers onto new platforms, and regulators like Ofcom need to be close behind."

Longer Term Evolution

"The existing regulatory regime is built on linear broadcasting assumptions: pre-PIN, pre YouTube, pre VOD, pre digital switch over, pre global platforms, pre broadband. My guess is that fundamental change will be needed before too long"

UK based digital entrepreneur

"Broadcasting needs regulation because it's based on scarcity. But the future is about abundance, and choice, and the audience will increasingly be the regulator. So won't TV become more like any other medium?"

Agency executive

These views reflect an implicit change in the principles that underpin regulation. We are moving from a world where technology constrained consumer choice, and broadcast was such a powerful medium that it needed to be highly regulated. We are moving to a world in which consumers are much more empowered, and more media literate, and (seemingly) more relaxed about relationships with brands and media content providers and their appropriate use of their data. In other words the balance of power is shifting away from intermediaries such as publishers and media companies towards consumers and their relationships with the brands they value.

At the same time, the nature of the content itself is changing. Digital distribution and production will increasingly blur the distinctions between content and advertising in ways that are almost impossible to distinguish for viewers, or to audit by regulators.

This is a profound shift, although it is happening slowly. Over time it may alter the principles that underpin regulation, requiring a move from creating a world that is acceptable and appropriate to preventing the excesses of one that is not.

Regulators therefore face the same challenges as those faced by brands and media businesses: how to preserve the existing while creating the new, and how to best prepare for inevitable but unpredictable disruption.

Conclusion

This review has been a wide ranging one, and will have raised more issues than it has been able to settle. The four conclusions outlined in the executive summary remain paramount: TV advertising will remain strong until beyond 2020, but technology and consumer driven change is certain and marketers are already exploiting a myriad of new ways of engaging consumers with their brands. So while there is no need for urgent wholesale change, there are some tactical adjustments required, and a pressing need for longer term thinking.

I will finish with three quotes that encapsulate many of the themes raised in the interviews.

The first is from Bill Gates, and has become so familiar that it's importance can be overlooked. It's hard to grasp, but we are still in the early days of digital disruption, particularly with regards to video content and its associated business models. And there are important lessons from other sectors that have been disrupted:

"We always over estimate the change that will occur in the next two years and underestimate the change that will happen in the next ten. Don't let yourself be lulled into inaction"

The second comes from Adam Singer, the chairman of the British Screen Advisory Council.

"We will move towards a post-broadcasting age via the cumulative impact of lots of small changes. Each of these is like a small piece of coral that goes into building a reef: seemingly insignificant on its own, but en masse they're perfectly capable of ripping the hulls of old boats"

Finally, an interview with a senior executive in an agency who is balancing short term objectives against a backdrop of inevitable change:

"The changes in advertising are like the rivers of meltwater underneath the ice cap in Greenland. Everyone agrees that global warming is happening. If you listen hard enough you can hear the water gurgling, and if you measure cleverly enough you can prove the waters are rising. But it's equally possible to argue that nothing significant will change, partly because the consequences are so unthinkable. For now the future still belongs to whoever happens to be talking at the time. But my bet is that won't be the case for much longer."

ⁱ Jon Gisby is a media executive and adviser who has worked for leading edge companies that make, distribute and monetise video content. These have included senior roles at the BBC, Freeserve, Yahoo! Europe and Channel 4. More recently he's been building and advising next generation broadcasters including Rightster (cloud-based content storage and syndication for rights holders) and Magine (an app based multi-channel IPTV service from Sweden).

ⁱⁱ Source: BARB, ThinkBox

ⁱⁱⁱ Source: Advertising Association Expenditure Report 1995-2011, quoted by ThinkBox

^{iv} Nielsen Media Research

^v Mark Read, WPP Chief Strategy Officer, referring to Group M Forecasts at the SIME London conference 2012. Also consistent with forecasts from MagnaGlobal for 2012 and beyond.

^{vi} Source: ThinkBox

^{vii} Marketing in The Era of Accountability, Peter Field and Les Binet, 2007 and subsequent, as quoted on the ThinkBox website

^{viii} Ofcom forecasts, and Screen Digest

^{ix} I am indebted to Adam Singer, chairman of BSAC, for the 'three ages of video distribution' framework

^x ITC Multichannel Quarterly – Q2 2003

^{xi} Robert Kyncl, Head of Global Partnerships at YouTube, quoted in Washington Post January 12 2012

^{xii} Screen Digest forecasts

^{xiii} Richard Firminger, GM EMEA at Flurry Analytics, speaking at NOAH London 2012

^{xiv} Hans Vestberg, CEO Ericksson, speaking at SIME London Conference

^{xv} Google survey quoted by Robert Kyncl, head of YouTube, at MIP Conference 2012

^{xvi} Twitter TV Book, January 2013

^{xvii} Red Bee survey quoted at MIP Conference 2012

^{xviii} Robert Kyncl, head of YouTube, at MIP Conference 2012

^{xix} RedBee survey of smartphone users, quoted at MIP Conference 2012

^{xx} Quoted in the New York Times

http://www.nytimes.com/2007/10/14/business/media/14ad.html?pagewanted=all&_r=0

^{xxi} Analysis of BARB data for ITV channels, Channel 4 channels and Channel 5 channels for peak time audiences in October 2012

^{xxii} http://en.wikipedia.org/wiki/Dish_Network#AutoHop

^{xxiii} http://www.acbuk.net/pdfs/PVR_CONFERENCE_REPORT_AND_UPDATE.pdf

^{xxiv} ThinkBox analysis

^{xxv} Case studies discussed at ThinkBox seminar

^{xxvi} <http://www.channel4.com/info/press/news/channel-4-signs-two-major-brands-in-unique-product-placement-deal>

^{xxvii} <http://www.mirriad.com/news/pg-tips-teams-up-with-deal-or-no-deal/>

^{xxviii} <http://www.broadcastnow.co.uk/news/commissioning/groupm-to-fund-first-drama-commission/5044935.article>

^{xxix} <http://www.groupm.com/groupm-entertainment>

^{xxx} Marketing Week, 27 August 2009

^{xxxi} Ibid

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- ^{xxxii} James Atkins, Head of Marketing for HTC UK and Ireland, quoted in TheDrum.com December 10 2012
- ^{xxxiii} Mark Brandon, Virgin Media Commercial Director
- ^{xxxiv} http://corporate.sky.com/skyviews/sky_sports_hd/ryder_cup_anywhere_record_breaking_weekend_for_sky_go
- ^{xxxv} Paid Content, 22 November 2012
- ^{xxxvi} <http://www.premierleague.com/en-gb/news/news/news-international-acquires-premier-league-near-live-clip-rights.html>
- ^{xxxvii} Robert Kyncl, MIP Conference, 2012
- ^{xxxviii} comScore video metrix December 2012
- ^{xxxix} Allen DeBevoise, Chairman and CEO of Machinima, talking about RCVR on Machinima.com
- ^{xi} @hunterwalk, on Twitter, 22 December 2012
- ^{xii} <http://www.musicweek.com/news/read/gangnam-style-generates-8m-on-youtube-as-partner-revenues-double-in-2012/053273>
- ^{xiii} Dawn Ostroff, speaking at MIP, October 2012
- ^{xiiii} Robert Kyncl, MIP Conference 2012, <http://blog.mipworld.com/2012/10/liveblog-google-youtubes-robert-kyncl-at-mipcom/>
- ^{xliv} Luma Partners produce an excellent overview of the online video industry in a one page graphic. It is available here <http://www.lumapartners.com/lumascape/video-lumascape/>
- ^{xlv} Comscore Video Metrix report December 2012. NB this data does not yet include total data sets for UK broadcasters.
- ^{xlvi} Alex Tosolini, quoted in Marketing Week 17 September 2012
- ^{xlvii} The Rise of the Dual Screener, presented at the MIP conference October 2012. Presentation available online at <http://fr.slideshare.net/mipmarkets/miptv-mipcomredbeemediadecephertvsecondscreenswhitepaper>
- ^{xlviii} Multi Channel News September 16 2012
- ^{xlix} <http://www.billboard.com/biz/articles/news/1099021/shazam-says-super-bowl-audio-tagging-was-a-win>
- ^l Interview with Antony Rose on <http://www.scala-lang.org/node/11428>
- ^{li} Speech at the Guardian Changing Advertising Summit, 24 October 2012