



egta insight

ADVANCES IN HYBRID TELEVISION AUDIENCE MEASUREMENT

October 2015

Edition 1

egta.

www.egta.com



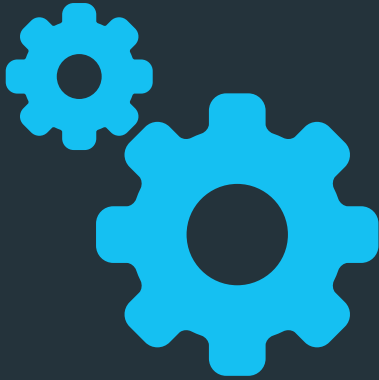
ABOUT EGTA

egta is the Brussels-based trade association of more than 120 television and radio advertising sales houses. Together its members, spread across 39 countries (mainly in Europe) collect more than 70% of television advertising investments made in Europe.

As sales houses of both public and private broadcasters, egta members commercialise the advertising space around audiovisual content available on platforms such as TV sets, tablets, smartphones, PCs, Smart TVs and other Internet-connected devices.

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EXECUTIVE SUMMARY

This report examines the evolution of television audience measurement (TAM) as it adapts to today's changing TV viewing patterns.

Part 1 sets out the perspective and viewpoint of television sales houses and broadcasters, highlighting the need for next generation audience measurement to be built on the strong foundations of existing TAM methodologies.

Part 2 examines the changing media landscape and the incremental shift towards consuming television and other audiovisual content on an increasingly diverse range of screens and devices. It also provides an overview of emerging hybrid measurement techniques and solutions.

Part 3 offers an update on several national projects for hybrid audiovisual audience measurement, covering those markets that have reached an advanced stage of development.

This report is not intended as an exhaustive analysis of TAM methodologies, and it should be noted that this is an area of constant evolution.

// Into a new era: building multi-screen measurement on the strengths of television methodologies



An introduction by Jan Isenbart, President of egta and Research Director of Mediengruppe RTL Deutschland

The media landscape is evolving rapidly, presenting people with a rich and diverse range of choices about where, when and how they access content. At egta, we have seen how television has embraced the opportunities of the digital evolution, while at the same time continuing in its leading linear role of informing, inspiring and entertaining audiences across the world.

TV is the first choice for advertisers, offering great reach, great storytelling opportunities, sound efficiencies and unrivalled effectiveness. Holding the lion's share of media spending in most European countries, one pillar of television's success is built on the accuracy and accountability of its audience data, which in Europe is predominantly organised on the model of the national level Joint Industry Committee (JIC). This ensures that TV audience data is of a very high quality and transparency and in turn gives media buyers and their advertiser clients unparalleled confidence that their investments will be converted into real contacts and effective marketing outcomes.

Television audience measurement (TAM) is well established and trusted throughout Europe, and its methodologies are relatively similar from country to country. It is therefore both logical and desirable for the strengths of TAM to be transferred to the measurement of online video, which has developed within much less transparent or consistent regimes than television. The online space has to date been characterised by fragmented *black box* measurement approaches and a landscape of *walled gardens* as some competitors have sought to dominate online video revenues, and it is only by adopting sound, independently controlled research that fair comparisons and a true understanding of today's viewing behaviours can be achieved.

Innovation requires investment, and this can be seen in the ambitious projects currently being developed and deployed, in many cases led by the television industry. And the benefits stretch beyond purely commercial interests: enhanced measurement is needed to allow broadcasters to understand their performances across all screens, and to close the apparent – and currently widening – gap between *real* and *measured* consumption. Furthermore, this clarity will allow marketers to better evaluate the relative effectiveness of the media choices at their disposal, informing their decisions and strengthening their brands' connections to consumers.

The television industry must be the pioneers for change and improvement in this field, or risk competitor platforms setting the agenda and defining tomorrow's *de facto* standards, even if biased, non-transparent and impossible to validate. A level playing field on which all viewing is measured on a like-for-like basis, potentially leading to a combined currency, will also shine a spotlight on the comparative reach and power of television, linear and non-linear, versus online-only publishers. With solid and transparent multi-screen data at our hand, and in the light of TV's unaltered strong consumption and impact, we certainly have little

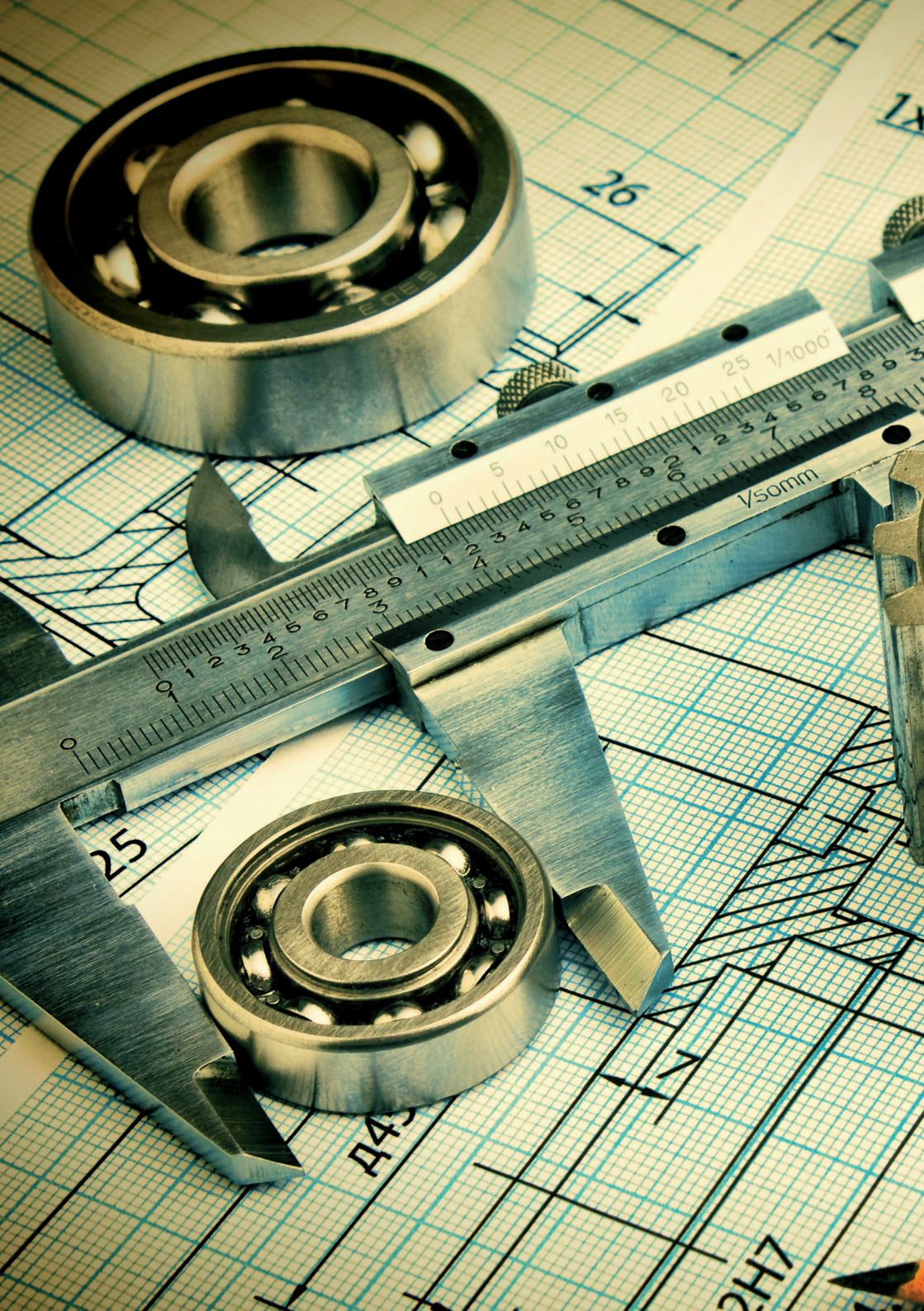
reason to be afraid of any challengers in the world of video.

The first part of this report explores the current needs and state-of-the-art in television audience measurement, including the new technologies and techniques that are being developed to cover multi-screen and multi-device viewing, whilst the second part offers an update on the progress several advanced markets are making towards new audiovisual measurement solutions.

After years of dedicated work, these efforts are just starting to bear fruit, with the first market-level reports of online television viewing beginning to emerge. There is much work to be done, and many challenges to be overcome, before audiovisual measurement attains the next level and becomes as familiar as today's daily TV ratings. Yet we feel confident that in many markets TV channels and sales houses are already well on their way towards that goal. But we must keep the pace high.

We hope that you find this report of interest and value. We invite you to contribute to and follow this important area of development as egta continues to help the television industry and our members – through its AV Currency Working Group and other initiatives – to move into a new era for audience measurement, and thus into new opportunities for growth and monetisation.

“TV is the first choice for advertisers, offering great reach, great storytelling opportunities, sound efficiencies and unrivalled effectiveness.”



PART 1

**THE IMPORTANCE OF HOLISTIC
TELEVISION AUDIENCE MEASUREMENT
ACROSS ALL SCREENS**

// The view of television sales houses

egta's television sales house members share the opinion that in today's digital and increasingly connected multi-screen and multi-device media world, where there is more information, choice, individual control and customisation, audience measurement systems and data analytics must be adapted to the new reality. Viewers today watch television content on many screens other than TV sets and usually do so via the Internet, using a variety of connected devices, and their viewing behaviour has evolved faster than the audience measurement techniques that form the basis of advertising transactions. The accurate and comprehensive measurement of television content requires a joint effort of all actors in the advertising industry: media owners and their sales houses, advertisers, media agencies and research providers.

The television sales houses represented by egta base their arguments for evolved audiovisual audience measurement on the following premise: television is – and will remain – the leading mass communication medium, while also proving effective for smaller target groups through niche and thematic channels, whether delivered via over-the-air broadcast, cable, satellite, Internet Protocol Television (IPTV) or over-the-top services. It is the medium that enjoys the most effective, quantitative and robust measurement, and the use of electronic people meters is almost universal. Television not only offers the most accurate data, it also allows meaningful comparison between countries. Effective evolution therefore requires the extension of traditional television audience measurement (TAM) systems to all other devices, rather than its replacement by an entirely new system.

Several countries, a number of which can be found in Part 3 of this report, are already developing new audiovisual measurement solutions that can capture viewing beyond the traditional televi-

sion screen and delivery methods. These projects, which typically involve a hybrid methodology using two or more types or sources of data, are at different stages of readiness: in some cases, the first results are being reported to the market, others are at the deployment and testing phase. Unlike traditional television audience measurement, which is very similar across countries and uses well established methodologies, these new approaches to comprehensive viewing measurement differ markedly between countries in terms of the technologies and statistical modelling techniques employed. Beyond the technical challenges associated with measuring increasingly fragmented device usage, some of the most important unanswered questions lie in the commercial decisions that will ultimately be taken around how to use audience data for monetisation in the future: the question of tomorrow's currencies.

// Balancing pace of change with the need to develop robust and future-proof solutions

Change is nothing new in television, a medium that has gone from just a few linear channels broadcasting for only part of each day in black and white, to a 24 hour, multi-channel, linear and on-demand offer that covers almost every conceivable human interest, delivered in ever higher definition to ever larger screens. TAM has naturally evolved at the same time, both in terms of the methodolo-

“In today’s digital and increasingly connected multi-screen and multi-device media world, audience measurement systems and data analytics must be adapted to the new reality.”

gies and technologies deployed. Measurement has moved from paper diaries, with results reported after weeks' or months' of delay, to electronic measurement by people meters, which can deliver overnight results for television viewing. The technology of audio matching has in recent years been supplemented (in some cases replaced) with watermarking. As personal recording devices, first analogue and later digital, have increased in penetration, markets have adopted techniques to allow both live and time-shifted viewing to be included within television ratings.

The most recent shift in viewing, which is discussed in Part 2 of this report, has seen viewers use an increasingly diverse and sophisticated range of Internet-enabled devices to access television content in new ways, presenting TAM with its latest – and perhaps most difficult – challenge. Whilst the panel-based and census-level data collection techniques developed for Internet Audience Measurement (IAM) are now being deployed to capture these new *video* viewing behaviours, until recently it has not been possible to combine these technologies with traditional TAM to provide holistic audience figures.

It is arguably harder for TAM providers to respond to these changes than it is for viewers to adapt and evolve their consumption behaviours. Inevitably, media agencies and their advertiser clients require the most accurate, comprehensive and granular data possible, and broadcasters want to

ensure that every person who watches their content – and the advertising around it – is captured, and there is therefore pressure from all sides for TAM providers to adapt their services quickly. This presents two challenges for TAM providers: firstly, they must develop and rigorously test solutions that are increasingly complex from a technological and methodological perspective; and secondly, they require the consensus of many different actors – sometimes with contrasting opinions – before they can adopt a particular route, and in many cases they rely on broadcasters and publishers to take some form of action, such as the deployment of measurement tags in their content, before they can start reporting data to the market.

Above all, TAM operators need to ensure they retain the trust of all interested parties. Whereas digital has arguably been able to adopt a more *ad hoc* approach to measurement, with incremental improvements over time, the television industry stands to suffer potentially irreversible damage if any next generation TAM systems are flawed when launched.

One approach to this has been the deployment of video audience reporting in stages, as seen for example in France and Sweden. BARB in the UK has chosen to release its first *TV Player Report* (September 2015) in beta form, using data from only a selection of the country's broadcasters at first. This allows development of the new measurement system in the UK to progress faster than would be the case if BARB waited for all broadcasters to be fully ready with the technical deployments they need to enact.

// Television audience measurement as a quality benchmark for future systems

To ensure the next generation of audiovisual audience measurement meets the needs of both advertisers and broadcasters – and by extension

“To ensure the next generation of audiovisual audience measurement meets the needs of both advertisers and broadcasters, egta believes in a viewer-centric approach.”

their sales houses – egta believes in a viewer-centric approach. Future TAM systems therefore need to be tailored to make the most of the combined benefits of television and Video On Demand (VOD), rather than exposing the differences between the two, and egta therefore recommends that – wherever possible – TAM operators aim for a holistic system that covers all video exposures in a single harmonised database and avoid creating different

databases for different screens. Furthermore, the established high standards of television audience measurement must be used as the benchmark for future measurement solutions. For sales houses, the ultimate goal is to deliver equivalent metrics for both cross-screen advertising campaigns and traditional television campaigns, especially reach, frequency, demographics and viewing duration.

// Introduction to egta's AV Currency Working Group

Since 2011, representatives of egta's member television sales house members and experts from the industry, most notably from audience measurement Joint Industry Committees (JICs) and service providers, have met frequently. The principle objectives of the group have been threefold:

Firstly, to share experience and knowledge across markets on new developments in audiovisual (AV) audience measurement. Over time, this has become increasingly focussed on efforts towards hybrid methodologies that can capture AV viewing across all devices and screens.

Secondly, to define common objectives and guidelines for the industry with regards to AV audience measurement.

And thirdly, to engage with other industry stakeholders, such as media agencies and advertisers, to ensure that the evolution of television audience measurement and AV measurement meets the needs of the advertising industry at large.

egta published its *Guidelines for the future of audiovisual audience measurement* in 2014, which presents the view of television sales houses and offers recommendations for best practices in developing TAM-based methodologies to measure audiovisual content regardless of when, where, and on which device this viewing takes place.

In brief, egta's recommendations are as follows:

- A **viewer-centric approach** that includes any viewer's audiovisual contacts across any screen in the same database, rather than silos tailored to capture individual screens separately;
- A **new measurement set up using the reliable, panel-based TAM as a basis** (i.e. that continues to reflect the existing television currency; providing notions of duration and not only reach) while integrating video census data;
- A **hybrid product**: a single currency based on more than one measurement;
- The **harmonisation of advertising metadata of all video content** as well as the monitoring of the new measurement by TAM organisations and auditing by a third party to ensure the validity of data and full transparency;
- A system that allows for the **possibility to break down the data between devices** and to show how integrated, multi-screen video campaigns can help build incremental reach and drive traffic from one medium to another;
- The possibility of having **separate trading and planning currencies** if that facilitates appropriate measurements for different purposes.

// Getting the balance right: a view from the UK

Providing a media agency perspective on this approach in a piece for Mediatel, Tom George of MEC Europe offered the following commentary on the value of BARB's beta test: *"Joint industry research bodies are often criticised for the speed at which they move. This is perhaps inevitable when a whole industry needs to align behind a new way of doing things. And the advent of the Internet has shaken up expectations of how quickly new forms of accountability can be delivered. Equally, we have to bear in mind that measuring activity on the Internet is not as simple as it might have once seemed. It only takes a small change in software code or the adjustment of one parameter to come up with a completely different answer. BARB has a well-deserved reputation for delivering trusted audience numbers and it would be doing all of us a disservice if it launched the first set of numbers that it could lay its hands on. This is why it's important that BARB has taken time to get this new data launch right."*

From the TAM provider's perspective, BARB's Justin Sampson explained to egta: *"We believe that beta reporting is one way of striking a balance between responsiveness and robustness. Beta reporting also helps to provide further context on the pace of change. Online distribution is clearly becoming an important part of the ecosystem, although there is still hyperbole about the extent to which it is drawing viewers away from more established television platforms."*





PART 2

THE EVOLVING TELEVISION MARKET

// Changing viewing behaviours

The viewing of measured broadcast TV content on television screens via traditional means, including live and catch-up, is under pressure due to changing audience behaviour in many markets throughout Europe and North America, and this is especially acute in younger age groups. Figures 1 and 2 show the average viewing time per individual in selected markets, including those featured in the third section of this report.

For the wider population, measured TV viewing is quite stable in most markets, with some showing small increases in viewing whilst others show slight declines. However, the picture for TV set viewing amongst young adults (as defined in each market) is more striking. Every market in this selection of countries saw declines in viewing among this target group, with only Italy and the Netherlands maintaining close to parity across this three year period. For example, viewing on television sets amongst young adults fell by 12.6% in France, by 9.4% in Germany, and by 12.1% in the UK.

In the absence of comparable supporting data, it is difficult to quantify precisely how much of this decline in TV viewing is due to young people replacing their big screen television viewing with the same content on other, unmeasured, screens, and how much has shifted to viewing non-broadcaster content or other, unrelated, activities.

European markets have recently experienced competition from new entrants, most notably Netflix, that offer high quality archived content on demand – at a price to the consumer, of course. Broadcasters themselves have also created competition for their linear output by developing sophisticated over-the-top (OTT) services, with max-dome (ProSiebenSat.1) in Germany, MYTF1 (TF1) in France and the iPlayer (BBC) in the UK being good examples. Even in the absence of per-market streaming data from Netflix and its rivals, it is

reasonable to expect some of this viewing to have moved away from traditional television distribution channels.

Netflix did release some headline streaming and subscriber number figures that allow broad comparisons to be made: according to the company's Q2 2015 letter to shareholders, 60 million subscribers (of which about one third are outside of the US) streamed 10 billion hours in the first quarter of the year, representing an average of about 55 hours per subscriber, per month.² By comparison, the average minutes of TV viewing per viewer in the US – where some forty percent of households now subscribe to a subscription-VOD service such as Netflix or Amazon Prime Instant Video – stood at 141 hours per month in 2014.³

// Quantifying broadcasters' missing eyeballs

The industry body Thinkbox conducted research in 2014, using multiple data sources, that sheds light on video viewing patterns in the UK, as shown in figure 3 on page 18. This showed that whilst young people indeed consume a variety of video content of different types, and by extension use a range of devices to do so, television is still dominant, accounting for almost two-thirds of their total viewing. From this snapshot of the UK market, it can be argued that the existing TAM fails to account for 6.9% of this viewing in the case of young adults and 3.0% for the whole population, i.e. the amount of broadcasters' content that is viewed on-demand and excluded from the consolidated figures (Live + VODSAL + 7 days).⁴

Whilst the findings of one national study cannot represent the reality across Europe, it at least offers a measure of the opportunity cost of excluding broadcasters' online video viewing from the television currency.

Being excluded from the television currency by no means prevents broadcasters from exploiting

FIGURE 1:

AVERAGE DAILY VIEWING TIME: ALL INDIVIDUALS (HH:MM)

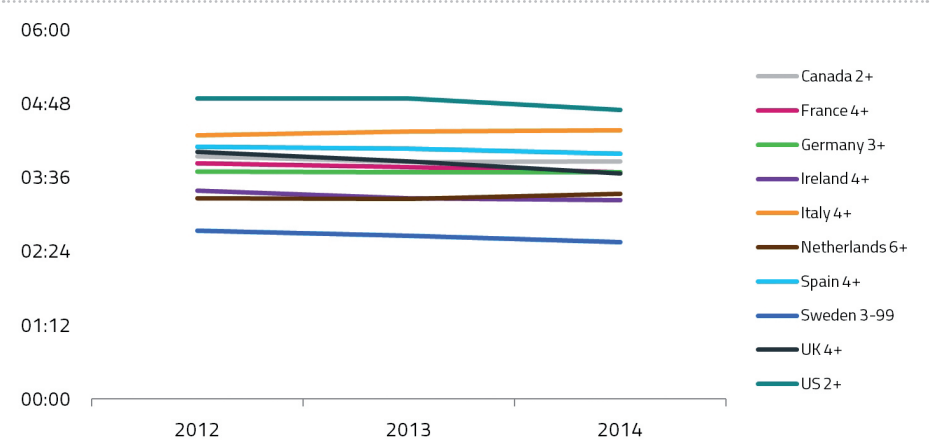
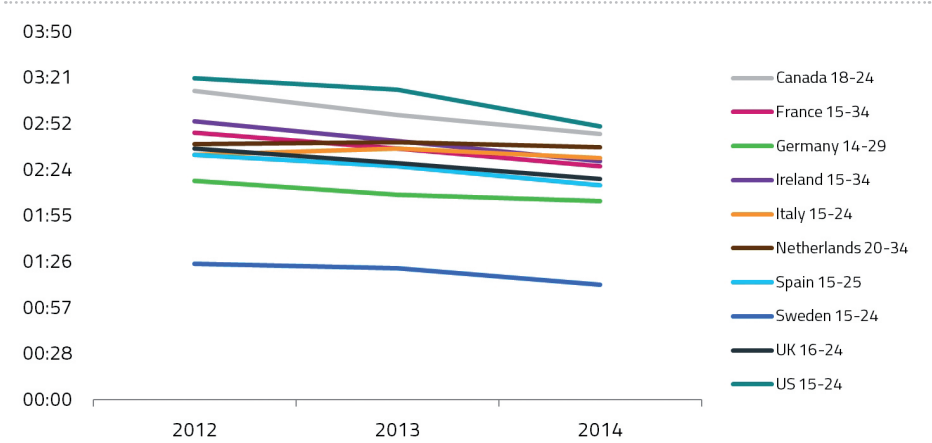


FIGURE 2:

AVERAGE DAILY VIEWING TIME: YOUNG ADULTS (HH:MM)



Sources: Numeris (CA); Médiamétrie (FR); AGF (DE); TAM Ireland (IE); Auditel (IT); SKO (NL); Kantar Media (ES); MMS (SE); BARB (UK); Nielsen (US)

commercial opportunities around their VOD, and indeed some broadcasters choose to erect a pay wall around this portion of their content. Advertising, in the form of pre-rolls, mid-rolls and other formats, may also be traded on broadcasters' own server data, raising the issue of how television currencies should evolve – if at all – in the future (see page 22 for further discussion).

// Overview of television audience measurement in Europe and North America

TAM in European countries and North America is typically organised under one of three models: a Joint Industry Committee (JIC), Media Owner Committee (MOC) or an independent research agency, which is normally a commercial entity that operates within a validation and auditing regime. A number of companies carry out the fieldwork, data processing and reporting on behalf of the television industry in each market, in some cases alongside each other as complementary service providers, within joint ventures or other partnerships.

TAM for broadcast television viewing has long been established in most markets, and whilst there are small differences in specific methodologies from country to country, for instance in the reference populations, measurement units and persistence times used, the basic concept is relatively homogeneous.

Fixed people meters installed in the households of a panel that represents the television viewing universe record what has been watched, when and by whom. The technology of audio matching, in which the audio signal is recorded by the meter and reported back to the measurement organisation in order for this to be matched against archive files and aggregated into audiences, predominates, and in some cases this is supplemented or replaced with water marking techniques. Watermarking requires participating broadcasters to embed code

into their signals, which has the advantage of differentiating between the same content distributed over multiple channels, for example standard and high definition channels, via online simulcast or on TV catch-up services.

The French research organisation Médiamétrie is a rare example of a market where the fixed meter uses watermarking technology, rather than audio matching, to establish the audience. The technology allows delayed viewing to be measured easily via the insertion of time stamps into content, as any shift in the reception of these time stamps recorded by the meter gives an indication of whether a programme was viewed live or following a delay. The technology also allows the measurement of some viewing on fixed location desktop computers, laptops and potentially other devices that are within range of the meter.

One exception to the more common fixed meter approach can be found in Canada, which uses the Portable People Meter (PPM) device for TAM in the country's larger market areas, with a supplementary diary methodology to cover the remainder of localities. Other markets, such as Norway, also use PPM to cover out-of-home (OOH) television viewing.

Until recently, the most notable differentiator between TAM methodologies has been the treatment of delayed, or time-shifted, viewing (TSV). Broadly speaking, the measurement of TSV with consolidated ratings over periods of a few days or longer has been deployed in the majority of Western and Northern European countries, as well as the US and Canada, whilst it remains less common in Central, Eastern and Southern European countries.

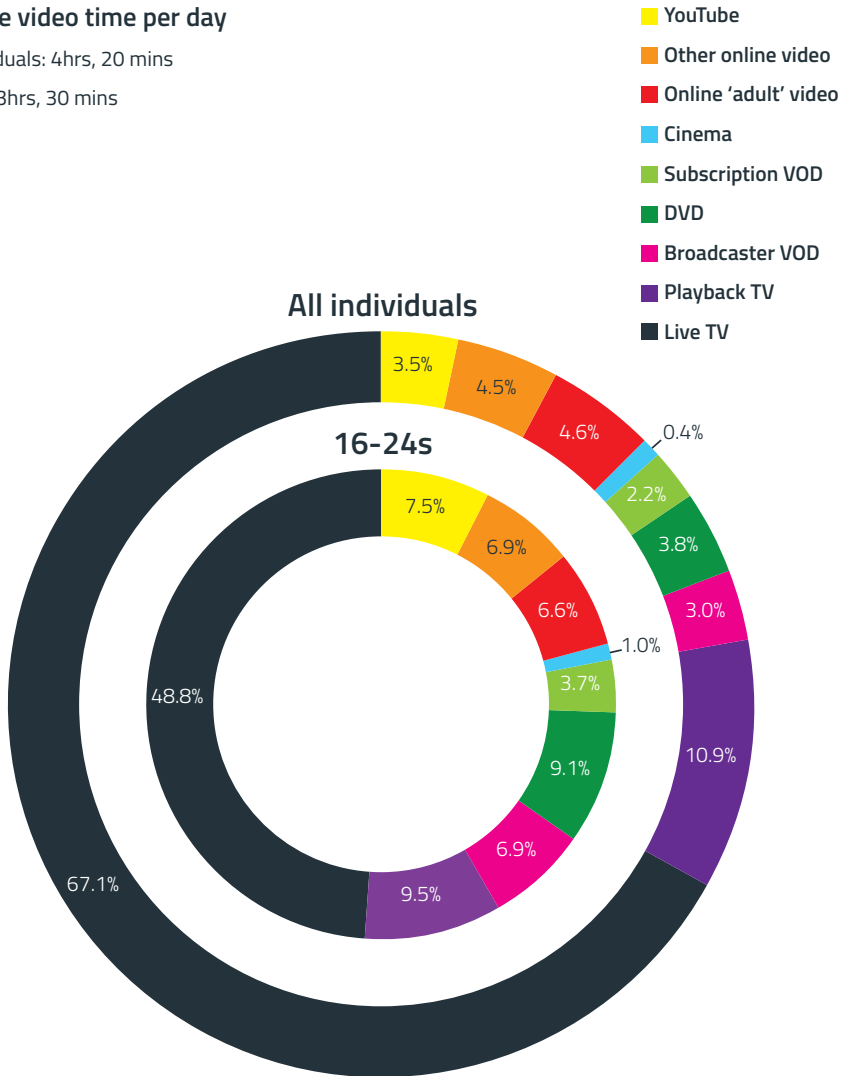
Many TAM organisations are now deploying methodologies to capture viewing on PCs, mobile and other Internet-enabled devices. In many cases, PCs and laptops are the first – and methodologically easiest – of these devices to be included within the

FIGURE 3: TOTAL UK VIDEO CONSUMPTION: ALL PLATFORMS/DEVICES

Average video time per day

All individuals: 4hrs, 20 mins

16-24s: 3hrs, 30 mins



Source: Thinkbox, 2015

Data sources: 2014, BARB / comScore / Broadcaster stream data / OFCOM Digital Day / IPA Touchpoints 5 / Rentrak

measurement, followed by smartphones, tablets and other equipment. Online activity on PC-based browsers presents less of a methodological challenge, as appropriate measurement techniques have been established and refined over several years. The mobile web is different, and requires new technologies such as software development kits (SDKs) to be developed to measure app-based activities.

The typical methodology used is a software meter that is installed on panellist households devices, and these work alongside people meters to deliver additional data to the research organisations.

// Extending TAM beyond broadcast viewing: hybrid solutions

Several markets are developing and, in some cases, testing additional technologies to measure the viewing of television content on screens other than the TV set, as well as content that has been accessed via online platforms and on-demand

through set-top boxes (STBs). In these markets, increasingly sophisticated techniques are being deployed, leading to the complete re-engineering of TAM methodologies.

The measurement of viewing across linear and non-linear distribution channels in most cases leads to a hybrid solution of one form or another, in which panel-based measurement is complemented by census-level data. The census measurement techniques that are currently being adopted for hybrid audiovisual audience measurement have largely been developed for market-level Internet Audience Measurement (IAM). IAM is less standardised across European markets than TAM, and not all countries have both panel and site-centric (census) solutions in place.

The measurement of content consumed on the Internet allows census-level data, sometimes referred to as machine data or return path data (RPD), to be produced, and this gives an accurate account of total consumption, potentially across all devices and screens. Every video stream can be detected,

FIGURE 4:
AN OVERVIEW OF THE CAPABILITIES OF PANEL AND CENSUS DATA

Panel data	Census data
Respondent level data reflective of viewers' behaviour	Comprehensive and exact account of all online activity
Offers: <ul style="list-style-type: none">▪ Reach estimates▪ Demographic profiles▪ Cross-platform behaviour at household/ individual level	Offers: <ul style="list-style-type: none">▪ Total usage▪ For all websites and apps



including the time and duration of viewing and any actions, such as pausing or stopping the content, carried out by the viewer. It does not require any extrapolations to be made in order to estimate the viewing behaviour of the population as a whole.

Whilst this is highly advantageous compared to the limitations of data derived from panels, which by their nature only capture a snapshot of consumption within a small sample, census-level data gives information only about what was consumed. It says nothing about the characteristics of the people actually viewing or hearing the content. For a complete understanding of who, as well as what, was consumed, census-level data needs to work alongside a panel, which can deliver information on demographics, such as age, gender and other attributes, and for this reason panel-based measurement remains a central component of all the hybrid AV measurement approaches currently being developed.

An overview of the capabilities of panel and census measurement can be found in figure 4.

It is important to note the necessity of maintaining the integrity and robustness of existing TAM systems. As these form the economic foundation for the vast majority of commercial television broadcasters' revenues, as well as an important source of revenues for many private broadcasters, the JICs and research organisations currently building out extended measurement capabilities are ensuring that these developments do not have negative effects on the existing television currencies.

Whilst TAM organisations are not alone in developing solutions for measuring online video, they have the advantage of being the only organisations with access to raw television viewing data in most markets (the US being a notable exception). Individual companies, such as Google, Facebook, Dailymotion and others have access to huge and very rich datasets, including the reach of their services and in some cases demographic data on their users, but

they cannot deliver cross-platform video reach that includes viewing on both television and online. TAM organisations are the only bodies that can deliver this data with the transparency and credibility required by advertisers and media agencies.

// The challenges of measuring fragmented audiences across devices

Viewing on Internet-enabled devices takes video from the main, easily measured, television screen onto a proliferation of devices, greatly increasing the complexity of the task. Not only do different operating systems, browsers and mobile apps need to be accounted for, each of these may have multiple versions and updates in operation at any given time. The same is true for the VOD players deployed by television broadcasters for their on-line distribution, and the technical functionality of these varies greatly in the level of sophistication they allow.

Extending audiovisual audience measurement (AVAM) to include return path data (RPD), either from online media players or Internet-connected set-top boxes, requires considerable input on the part of participating broadcasters and publishers, as they must integrate identifiers of one kind or another into their content. This necessitates working with new teams and individuals within each company, and implementing new processes across an entire industry has been seen to be a difficult and lengthy process in those markets that are introducing hybrid systems.

// Defining the scope of audiovisual measurement

A fundamental question to be addressed in each market is the scope of the new AV measurement universe, as well as the purpose of the measurement itself.

When building out measurement into the online environment, it becomes technically possible to integrate consumption data from an almost unlimited variety of sources, from non-broadcast and user-generated content (UGC) video platforms to social media. Whilst the inclusion of a wide range of publishers and content providers may be advantageous in terms of providing a detailed and comprehensive understanding of consumption patterns, it increases the complexity of the measurement and may not serve the interests of the television industry in that market.

In Europe, the most common approach has been to start with the objective of measuring the online content of television broadcasters that are currently measured within the TAM, as well as other professionally produced content from other publishers. In some markets, there is a secondary objective to extend the measurement to cover all AV content, including UGC, whilst others expect to limit measurement to broadcasters' content only.

The disadvantage of including non-broadcaster video content, aside from the additional complexity in integrating the publishers themselves, is that it naturally dilutes audience shares. The shift from a stable and relatively small number of measured publishers to a more volatile and larger universe may actually render audience shares meaningless, as can be seen in the example of the Netherlands (see market description on page 37). From an advertising perspective, the more services that are measured the greater the potential volume of inventory available to the market, which may have an impact on broadcasters' advertising sales as well as their positions on the market.

On the other hand, delivering equivalent measurement data helps to bring some perspective on the relative size of television as compared to other AV sources. On average, individuals spend far more time watching television than they spend with even the online publishers with quite high reach,

such as YouTube and Facebook.

// Defining the purposes of tomorrow's AVAM data

One of the primary functions for TAM is to provide a currency for the trading of advertising on broadcasters' channels, and this can be expected to remain the economic basis for the television industry for many years to come. In the absence of any standardised, market-level measurement to date, online video, however, has adopted ad server data as a *de facto* currency. In many ways, this model serves online video publishers better than traditional TAM, in that it provides instant, on-demand data that can be used in automated and programmatic trading platforms, including real-time bidding (RTB).

At this early stage of developing hybrid AVAM environments, there is no clear consensus from the television industry over how the data will be used, and whether there should be separate currencies for media planning and trading, for example. Ultimately, this will be a decision taken by each market as the measurement methodologies and business models themselves evolve and adapt to the new conditions.

// The potential impact of hybrid AVAM data on advertising sales

The actual impact on television advertising sales cannot be assessed until the hybrid AVAM solutions currently under development have reached operational status and started delivering currency data to the market. However, it is possible to look ahead to how the relationship and conversations between sales houses and clients may adapt in the future.

The environment in which the focus has traditionally been on market shares based on who viewed what programmes at some time in the recent past is changing. On-demand viewing departs from the

concept of fixed starting times for programme viewing, and if this continues to grow in scale it will make meaningful market shares less and less reliable or relevant. It may be the case that TAM itself needs to move towards a model whereby the reported data shines a spotlight on *what viewing* took place *at a given time*, rather than remaining focussed on *programmes* themselves.

Media buyers themselves may want to buy either on a Cost Per Thousand (CPT) basis, in line with digital campaigns, or Gross Rating Points (GRPs), more closely mirroring the TV buying model (please see glossary on page 55 for further explanation). Ultimately, data reporting – whether this forms the basis of a single currency or multiple currencies – needs to be adapted to best serve the sale of advertising around audiovisual content.

// Extending and multiplying panels

To date, all of the projects being developed to measure *Any Time, Anywhere, Any Device* (ATAWAD) viewing retain one or more panels and add census-level data. Two options exist for extending the scope of the panel data: firstly, a single source panel that covers both offline and online viewing, or secondly, two or more panels to cover viewing on different platforms and screens.

The single panel approach is advantageous in terms of the quality of the data generated as compared to the use of two or more separate panels. Using multiple panels requires statistical modelling techniques and profile matching to form the basis of the measurement.

However, single panels have their limitations. Asking panellists to deploy measurement across more than one device increases the burden on them and may make recruitment and compliance more difficult. The measurement of viewing on smartphones, which is generally found to be a more challenging platform than PCs, also represents a

shift towards measuring consumption on personal devices that are often used outside of the home, rather than equipment that is both used by different people in the household and typically only within the home. For further analysis of this issue in relation to the UK market, please see page 44.

// Two approaches to online panels: software meters and Wi-Fi routers

Two approaches have been developed to measure online usage on panellists' devices: software meters, which are locally installed on each device and may be adapted for different types of equipment, for example PCs, smartphones, tablets and Smart TVs; and Wi-Fi routers, which capture Internet streaming data from all devices within the household to which it is connected.

Software meters have a number of advantages. There is no hardware, and they can be installed in as many devices as required with ease. This can also be done remotely, without the need for an engineer to intervene. They provide very accurate and rich data, and are suited to measuring time spent watching or listening to streamed media.

“The measurement of viewing across linear and non-linear distribution channels in most cases leads to a hybrid solution of one form or another, in which panel-based measurement is complemented by census-level data.”

However, meters are somewhat burdensome on panellists, especially if a single panellist uses several devices each of which has a locally installed software meter.

Wi-Fi routers reduce this burden on panellists, and their use eliminates some of the technical challenges associated with multiple devices within a household. These devices function as a proxy Wi-Fi, and the user experience is similar to that normally associated with log in-protected Wi-Fi in public places such as hotels. Each panellist is required to identify him- or herself when using the connected devices, which do not themselves need any additional software installations. This greater usability comes at the cost of measurement precision, which is lower with routers than it is with software meters.

The router solution also offers limited range, and any viewing that takes place on mobile devices out of the home is not measured. Furthermore, it is not possible to guarantee that all panellists do indeed use Wi-Fi at all times when in the home, as they may remain connected via mobile telecoms networks, such as 3G, and hence circumnavigate the measurement technology.

The router used by Médiamétrie and Google for their joint measurement project in France does not decrypt any encrypted Internet flows. It can record anything that uses the HTTP protocol, which forms the foundation of data communication on the World Wide Web, but it cannot measure content

streamed using the secure HTTPS protocol. As of September 2015, just over a quarter of the Internet's most popular websites have a secure implementation of HTTPS X. Whilst this is an advantage from a privacy perspective, it significantly restricts what can be measured by the router; YouTube, for instance, uses the secure HTTPS protocol.⁵

// Privacy issues

A commitment to data privacy is clearly of fundamental importance to any audience measurement system. Aside from a moral obligation to protect personal data and prevent its use for un-elicited marketing or other misuse, the willingness of individuals to participate in measurement panels will inevitably be hindered by any fears that their information may not be treated in the strictest confidence.

As panel-based measurement moves from the television towards more personal devices, such as smartphones and tablets, the range and type of monitored activity widens. Panellists' reluctance to submit information about their online activities across several devices is often cited as an advantage of using different panels to measure different pieces of equipment, rather than a single source for all.

Privacy becomes somewhat more complex in measurement regimes that involve data sources beyond panels, which are easier to control. Census-level measurement captures viewing and other activities without the knowledge or explicit agreement of those being measured, and it is important to maintain privacy controls when this data is combined with panel-based sources.

The use of third parties, for example under the partnership between Nielsen and Facebook in the US, has drawn concern from privacy advocates. Whilst Nielsen has built a strong reputation for its robust approach to privacy, Facebook has come in for criticism for the way it uses its registered us-

“A commitment to data privacy is clearly of fundamental importance to any audience measurement system.”

ers' data. In a piece published in the Los Angeles Times, a Facebook spokesman stated that: "We have worked with Nielsen under strong privacy principles; We don't believe that audience measurement systems should be used to adjust targeting; they should only be used for measurement. This protects the privacy of people viewing ads and ensures that both advertisers and publishers have the same information about the audiences."⁶

// A short and longer term look ahead

Progress towards completely operational hybrid AVAM systems will take time, and these will not be a reality for many markets before 2017. The re-engineering of measurement systems to include extended panels and census-level data requires considerable involvement on the part of broadcasters and other participating publishers, and steps such the implementation of tracking tags into all output and across all VOD player versions has been shown to take longer than expected, for example in the UK.

The most complex part of the process – the fusion of data sets to deliver high quality research results – remains to be resolved in most of the projects currently underway, and the next two years will be a period of tests and trials in several markets.

The answers to questions such as what form data reporting will take, whether there will be one or more currencies, and the business models behind future trading practices, are some way from being resolved at present.

What is certain is that people will continue to choose what, how, when and where they access audiovisual content, and the rate and direction of any change may help shape evolutions in audience measurement methodologies.





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PART 3

**AN UPDATE OF NATIONAL INITIATIVES
IN THE DEVELOPMENT OF HYBRID
AUDIENCE MEASUREMENT
METHODOLOGIES**



CANADA

// Numeris (formerly BBM): On Demand Measurement (ODM)

Canadian television and radio audiences are measured using the Personal People Meter (PPM), supplemented by a twice-yearly diary for each medium to cover smaller market areas. This work is carried out by the research organisation Numeris. By inserting a separate set of codes for linear and on-demand television content, broadcasters can ensure that all viewing can be captured by the PPM device and attributed by delivery platform. Numeris is already working with broadcasters to encode their VOD content, which will allow it to be identified within the PPM panel, and the next phase of the project for a full hybrid measurement model involves the integration of census-level return path data (RPD) from participating broadcasters' servers and from cable TV set-top box operators. Numeris is currently developing a proof of concept model for this data integration.

// Mobile measurement technology offers an on-demand solution

The PPM captures viewing and listening data from all sources, regardless of whether the content has been delivered by broadcast or via an online platform. Numeris is therefore able to measure television VOD viewing on set-top boxes and, in some cases, online VOD.

Under the existing model, any online live streamed viewing is folded into the regular currency. Should the market demand it, a solution to identify viewing by delivery platform would be relatively simple to implement, as it would just require appropriate encoding on the part of the broadcasters.

Several large broadcasters are now encoding their online VOD content, and Numeris will start releasing non-linear viewing data to the market in October, reporting on September 2015 data. The organisation will provide episode-level average minute audience (AMA) data from the encoded programs viewed by the PPM panel to the Industry on a monthly basis. Research reports that include aggregated genre-level reporting of comedy, reality and drama programs and VOD viewer profile information have also been distributed to the industry.

// Census-level data from set-top boxes and broadcasters' servers

Following pressure from the industry and a decision by Canada's broadcasting and telecommunications regulator, CRTC, cable television operators were asked to form a working group to explore how to release the viewing data from their set-top boxes to enrich audience measurement. This would be particularly valuable for smaller, niche channels, which are not well served by panel-based measurement systems.

The working group has asked Numeris to conduct a Phase 1 technical test that will combine RPD data from multiple set-top box providers. Subsequent testing would establish a method to link the STB and currency PPM data.

Following the first reports of digital cable VOD measurement in the second half of 2015, Numeris will continue to develop the hybrid TAM methodology and define the associated new business models with the industry through the course of 2016.



LISA EATON

SVP, MEMBER ENGAGEMENT

egta: *Canada is notable for the use of portable (PPM), rather than fixed, people meters for television audience measurement; what do you see as the main advantages of this technology?*

Lisa Eaton (LE): I truly believe in this day and age of increasing portable media consumption that it is very important to follow the consumer and their exposure to TV and radio stations as they move throughout the day. PPM has allowed us to seamlessly capture live TV viewing and Radio listening from the same household. It also captures playback, out-of-home tuning and live streaming of video and audio content regardless of device used. In addition, we have developed a non-linear measurement system called *On Demand Measurement* (ODM) that uses the same panel households and tracks their consumption of encoded VOD content. We feel this is a good solution for the Canadian market at this time as we continue to leverage the benefits of a portable single source measurement system to produce new audience insights.

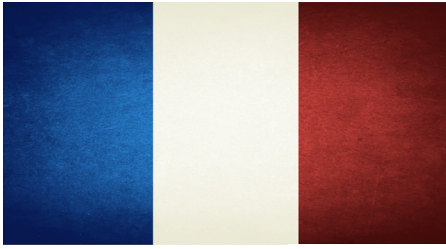
egta: *Can you explain how Numeris is integrating set-top box data into the measurement?*

LE: Exploring data integration is one of our top priorities at Numeris. We are planning a technical test this autumn that will test the ability to com-

bine different cable set-top box providers data to produce a unified viewing data set. Phase 2 of the project will be creating an integration model to combine the set-top box data with our PPM panel data.

egta: *What is your view on the form of currency that the Canadian market is looking for in the coming few years?*

LE: That is a difficult question to answer. I don't think there is consensus in the marketplace regarding the future other than to say they would like a currency that allows them to tell the best story about their audiences. I do believe we will continue to trade on Average Minute Audience (AMA) for the foreseeable future and we will incorporate new measures as they are developed. We have a number of areas of investigation that we continue to explore. It is a very exciting time for measurement. It is very important to remain as nimble as possible so we can adapt quickly to create the right solutions for the marketplace.



FRANCE

// Médiamétrie 4 screen measurement and hybrid television measurement for thematic channels

Television audience measurement is carried out in France by the research company Médiamétrie. The organisation has a rather unique position, in that it acts as both operator and JIC for TV and Internet measurement. Médiamétrie uses a proprietary television people meter that the company designed and developed in conjunction with technology partners, and this meter uses watermarking technology. The TAM service goes under the names *Médiamat* and *Médiamat/thématique* (for television delivered by cable, satellite or ADSL).

The French TAM system received a significant upgrade in 2014, with Médiamétrie adding the measurement of replay TV (which is accessed on-demand via broadcasters' web portals or via television set-top box services) to its television panel, reporting at aggregate level. In the past, only pre-recorded or paused programmes – for example using a PVR or computer hard drive – had been measured for consolidated live plus delayed viewing, meaning that replay TV content viewed via OTT platforms such as those operated by broadcasters or television service providers was not captured. This feature is enabled by a new type of watermarking technology: file-based (as opposed to broadcast) watermarking. In 2016, Médiamétrie

expects to report detailed information about the replay TV audience at the programme level.

// From 3 screen to 4 screen measurement

Médiamétrie operates as the JIC and operator for TV, Internet and radio audience measurement, and its online measurement expertise provided an opportunity to start measuring video across screens and devices. The first metered Internet panel was launched 15 years ago under the company's joint venture with Nielsen – called Médiamétrie/NetRatings – and this was expanded to include smartphones in 2010 and tablets in 2012. These mobile and tablet panels include iOS, Windows Phone and Android devices in particular. In the past two years, Médiamétrie has been working to unify these panels into a single measurement, and the results of the first 3 screen Internet measurement were released in January 2015.

The next step in this project is to extend this measurement to video content and to fuse it with Médiamétrie's TV panel. As part of this process, the company is also using its 4 screen single source panel, which consists of 3,400 households, which has been developed in partnership with Google. The first results of Médiamétrie's 4 screen measurement should be delivered to the market in early 2016.

// The single source Google and Médiamétrie Panel

Set up in March 2013, this initiative has some similarities to the basic concept deployed in the UK under Project Dovetail (see page 43), although the technology used to capture Internet usage differs between the approaches taken in France and the UK. This project has been audited, examined and supported by CESP (Centre d'étude des supports de publicité).

Television audience data is measured by Média-

métrie using the same meter technology and data processing as for its TAM ratings service, and the company transmits data to Google.

Google is responsible for measuring Internet usage data from all active devices within the panellist's households, including PCs, Macs, smartphones and tablets on all operating systems. This is carried out using a Google meter device, which takes the form of a proxy WiFi using a wireless router. The current measurement captures Internet data transmitted via the HTTP protocol. Google transmits data back to Médiamétrie.

This 4 screen measurement is not designed to replace the existing ratings data for either television or Internet, and it is used by Médiamétrie to sell adhoc audience analysis based on the results of the measurement, custom report and use it as an additional source in its currency 4 screen project.

// Enhanced measurement of thematic channels using TAM and set-top box data in a hybrid model

In 2014, Médiamétrie initiated a new hybrid television measurement initiative to better measure

thematic channels, with the initial support of the French subscription satellite, cable, IPTV and DTT service provider Canalsat. This project is separate from the 4 screen measurement outlined above, and it uses different data sources and methodologies. In this case, the term hybrid refers to the combination of people meter TAM data and return path data (RPD) from a sample of set-top box television decoders; census data does therefore not form part of this model.

Smaller and niche thematic channels in France face a challenge from online video platforms, and it is difficult to achieve granular audience reporting using the traditional TAM approach. The objective was therefore to be able to measure thematic channels with greater granularity and to increase the frequency of reporting. Médiamétrie's solution is built on RPD delivered initially by a sample of about 10,000 Canalsat decoders, with demographic information appended using an individualisation model. This household data is acquired using CATI/CAWI surveys. The RPD data is then used to enrich the viewing data from the *Médiamat* measurement service. The methodology used by Médiamétrie is described as log up (see figure 5).

The challenges for this form of hybrid measure-

FIGURE 5:
PANEL UP VS. LOG UP APPROACHES

Panel Up	Log Up
<p>The measurement basis is the panel</p> <p>The data from a given return path are used to adjust/weight the panel</p> <p>Advantages: Gain in statistical precision and individual data from the panel</p> <p>Limits: No gain in granularity</p>	<p>The measurement basis is composed of logs</p> <p>The panel data is used to build a model that will apply a demographic profile to the log data.</p> <p>Advantages: Gain in granularity</p> <p>Limits: Limitations tied to the use of models</p>

ment are twofold: firstly, differentiating between times when a decoder is on (and returning RPD) but the television set is switched off; and determining who – and how many – members of the household are watching at any given time. The first of these is addressed by using the TAM panel viewing data to identify and transform RPD logs that do not correspond with actual viewing. The question of who is watching is addressed using the individualisation process outlined above, which applies a statistical *Hidden Markov model* (specifically, a *Markov chain model* using mathematical algorithms adapted specifically for the parameters of this project).

Comparison of the results of this hybrid measurement with the *Médiamat* TAM data show good consistency. The granularity of the measurement is improved, and use of a much larger sample than just the people meter panel provides lower volatility and fewer zero ratings.

This approach is not expected to replace TAM, as it is not yet adapted to provide a trading currency for large channels (or television watched on non-RPD compatible methods), but the objective is to extend the project to cover a greater range of the automatic channels and TV operators in France in the future.

Médiamétrie was the overall winner of the 2015 iCOM Data Creativity Award for its hybrid TV measurement (please see <http://www.i-com.org/data-creativity-awards-2015/>).



GERMANY

// AGF: Streaming Project

Television audience measurement in Germany is the responsibility of the JIC Arbeitsgemeinschaft Fernsehforschung (AGF), with GfK as the contractor. Measurement for linear TV viewing is carried out using GfK's audio matching hardware meters, with a panel of 5,000 households that represent approximately 11,000 individuals.

In 2013, AGF established a second panel to measure non-linear viewing, using software meters, and census measurement for PCs and laptops. The online panel, which uses software, technology and services from Nielsen, includes some 25,000 people. The Nielsen technology was adapted to include extended features to meet the requirements for TAM – i.e. viewing duration, dedicated metadata, etc. The next stage of AGF's project is to develop a calibration model to bring the panel and census measurement together, followed by a data fusion of the TV (linear) and online (non-linear) panels.

// A two-panel plus census approach

The German television industry has chosen to establish a separate panel for non-linear viewing, to operate alongside the existing linear TV panel. This new panel provides data on audience demographics, age, gender and household composition. The system is open to any online publisher, provided that they integrate an AGF certified census mea-

surement kit to supply measurement events and standardised identifiers of content and advertising.

Online viewing data is already being published on a weekly and monthly basis, albeit without any integration yet between the panel and census. The census measurement is used to deliver a weekly *top ten title views* report, whilst the monthly reports give further details for each format. The monthly reports use the census measurement to provide the number of online views and the total number of minutes viewed for each format, and the panel data offers demographic profiles. At this stage, only content views are reported, rather than advertising contacts. Publishers have flexibility to set the definitions of format and publisher as they wish by defining respective identifiers within the census measurement. Figure 6 is a graphical representation of the monthly reporting for online television viewing.

These reports can be seen as an intermediate step to bridge the time while AGF is developing the calibration method for the metrics advertisers really need: demographic reach by format. This step is expected to be completed in the last quarter of 2015. The objective is then to provide a complete instance-level dataset to advertisers ready to be processed by AGF's or advertiser's own software.

The panel alone is not sufficient to deliver accurate reach for non-linear viewing, due to its inherent limitations. The panel only captures in-home viewing, mobile and other devices beyond PCs and laptops are not included, and the highly fragmented online viewing audience restricts the accuracy of a relatively small sample. AGF is therefore currently developing a calibration model for the panel and census-level data providing demographic reach metrics based on the relationship between views from the census and users from the panel.

The calibration model for online viewing has a number of limitations and challenges to be overcome, mainly associated with the limited sample

size for specific episodes. As a consequence, reporting will only be available initially at the level of a month's viewing, and this only for content and not for advertising. The data is also aggregated at the level of formats or genres, rather than individual episodes.

// A landmark deal to include YouTube within television measurement

The measurement of YouTube follows the hybrid measurement described above: YouTube videos will be measured with a census approach that provides the number of online views, viewing duration and content identifiers for each format, while panel data offers demographic profiles. A calibration model will unite those data to provide reach and demographics. At the same time AGF and YouTube will unite their respective online panels, i.e. the panellists from AGF's Nielsen online panel and YouTube's GfK online panel will be joined into a *virtual mega panel*.

// Further steps towards developing Germany's hybrid TAM solution

AGF is currently refining the calibration model for online viewing, and this phase is expected to be completed in the second half of 2015. A solution for the fusion of data from the TV (linear) and online (non-linear) remains a significant challenge, and the first results may be released on a very aggregate level to start with, scheduled for the first half of 2016. In order to ensure all viewing is measured across all devices, AGF is working to extend the non-linear panel and census beyond PCs and laptops to include mobile devices and Smart TVs. AGF will start with a census measurement of mobile apps this year and is likely to build up a panel for mobile usage. Smart TV measurement is likely to begin within the same time frame.



ROBERT SCHÄFFNER

HEAD OF MEDIA AND MARKET RESEARCH

egta: *Germany introduced measurement of time-shifted viewing (TSV) back in 2009; could you give an indication of the business impact (including revenues) that has had on the market since then?*

Robert Schäffner (RS): When I recall the extensive discussions before the introduction I was a bit astonished how rationally users took it after the data became available. We had no real debates whether the data quality was “good enough”. TSV quickly became a natural part of regular TV viewing just like cable TV or later IPTV. That speaks for the trust in JIC validated data, certainly. But then again: DVR usage never lived up to the hype created around the issue by techies. Even today it accounts just for around 1% of TV usage.

egta: *Do you expect the future inclusion of online video viewing into the currency to have a larger effect?*

RS: You bet! Not because online video would give us much more usage – for many broadcasters it might be less than good old TSV. But online video is different from linear television. It is basically not fully covered by the traditional TAM organisations, yet do we have a host of different data on its usage from other sources – views from server logs, clicks, likes and the like, both for broadcasters’

FIGURE 6: AN EXAMPLE DATASET FOR ONLINE TELEVISION VIEWING DERIVED FROM PANEL AND CENSUS MEASUREMENT

		Demographic Profile (panel), %									Views (census)		
Publisher	Unit	Gender		Age				HH size			Content views		
		M	F	< 14	14-29	30-49	50+	1-2 ind.	3+ ind.		Views (n)	Time (Mio sec)	# of titles
RTL now	Farmer wants Wife	24	76	-	39	19	42	63	37		1,130,019	215	124
RTL now	Alles was zählt	16	84	-	54	36	10	56	44		2,838,475	485	2,180
RTL now	Got Talent	57	43	-	41	45	13	67	33		560,065	174	63
RTL now	Who w... millionaire	59	41	-	3	13	84	99	1		242,624	49	184
Vox now	Shopping Queen	10	90	-	56	23	21	43	57		2,559,019	528	772
Vox now	Sing My Song	8	92	-	56	17	28	74	26		248,677	73	45

Source: AGF (December 2014)

Reports available at: <https://www.agf.de/daten/videostreaming/strukturen/>

sites as for pure online video publishers.

These data cannot be brought together with the data used to buy and evaluate other media. We feel a tremendous uncertainty from advertisers, they are being flooded with data from all corners but what they really want is a complete picture out of one harmonised and certified framework.

Do you remember the calls to stop building new silos? That's what it's about. This is the challenge, and this is our mission.

egta: *Germany's TV measurement body, AGF, announced in April that it is to include YouTube viewing in the ratings measurement. Why was this decision taken, and how do you believe this may benefit YouTube on the one hand and TV broadcasters on the other?*

RS: Well, it was a joint release from both sides, not an AGF decision.

For AGF the motives are clear: the moment we decided to extend TV measurement to online video it was natural to cover as many online video publishers as possible. Even more so when it comes to the country's biggest video platform. Bluntly speaking, a video currency without the biggest player is not such a good currency.

I cannot say what finally triggered YouTube to take the step. I know advertisers welcome the decision. And it sure makes sense to be able to compare and evaluate YouTube target groups against linear TV viewers in the same dataset advertisers use for buying airtime.

Anyway, I am glad we found a way together. Let's call it common sense, pragmatism or professionalism, whatever you prefer.

egta: *The German market is adopting a two-panel approach to measuring TV content across all devices; what are the advantages of this over a single panel approach?*

RS: The first advantage is that whatever we do

in the online panel does not have an impact on the measurement of linear television. As you described, TV usage has been suffering a bit lately. Imagine if this would have coincided with a rollout of a new online measurement within the TV panel – we would have had endless debates.

Second, recruiting panellists for online measurement is much cheaper. People simply download a piece of software, you never have to visit them in their homes and attach hardware meters to their sets. So you can afford many more panellists, which is essential in such a fragmented world as online video is. Sample size is a much bigger factor.

egta: *Although you may not have reached a final decision on this, what would you like to see as the shape of the future currency (or currencies)?*

RS: I wish it could be as simple as TAM measurement was in the middle of the 90s. Sadly, I have the suspicion it is going to be exactly the opposite. Technology will continue to evolve, usage is going to follow it, so we have to continuously evolve media measurement as well.

What seems clear is that integrating data from vastly different sources – panel, server data, surveys, third-party data – is becoming a key factor. That's what hybrid is about. In other words, even though we are longing for one system, the interaction of this system's components is getting more and more complex.

This is where a trusted body like a JIC comes in. Trust is an asset when you cannot judge whether the methods behind the data are flawed or not. So JICs are going to have a good fortune – if they deliver.



THE NETHERLANDS

// SKO: Videodata Integration Model (SKO-VIM)

The Netherlands has developed an online video currency using a hybrid model of census data alongside an online panel. The next objective is to integrate this online currency with the TAM in order to give a cross-platform currency. In the first stage, a programme's performance across online and offline platforms will be reported, and a second stage will see the introduction of cross-platform campaign reporting.

In May 2015, Stichting KijkOnderzoek (SKO), the JIC that commissions and oversees television audience measurement in the Netherlands, formed an alliance with VINEX, which represents Internet publishers and sales houses. Following this, SKO and VINEX announced the establishment of a new market-level measurement for Internet. Named NOBO, the research is carried out by TNS Nipo and Kantar Media, and it represents the first time the major players in the Dutch online industry have agreed to participate in a project of this type. The new methodology used within NOBO forms the online video pillar of SKO's hybrid model to measure video content across all devices and screens.

// A fusion of census and panel data

The census-level data is derived from tagging/libraries inserted into content by the participating

publishers, which currently comprise RTL, NPO and SBS, with BEVIACOM, Discovery, FOX and Sanoma to be added from the fourth quarter of 2015. For the most part, this data on broadcasted and online only content is delivered by comScore. Identifiers within this census data identify members within the online panel, allowing demographic data to be appended to the census data. comScore was selected for this role, as it offers an open market approach that also enables the integration of data from other suppliers, for example from the linear stream apps of the telecoms companies Ziggo and KPN. This process requires input from the participating broadcasters, as they have to insert the tags and libraries into their content in order to be measured.

A new online household-level panel, called the *Mediapanel* and run by TNS/Kantar Media, has been established in which all members of the household (aged 6+) participate. This provides a single source for online behaviour across all online devices, rather than the multiple panel approach for different devices taken in some other markets. Panel-lists log onto their connected devices at the start of each session by selecting their names from a drop-down list, either through a home page login for desktop or laptop computers, or via an app on mobile devices. In the case of mobile devices, this process is activated when a relevant app, such as a browser or video platform, is opened, and this measurement software is available for Android and iOS platforms. The panel management is carried out in a similar way to traditional TAM panels.

The measurement and reporting of online video advertising is carried out according to the IAB VAST (Video Ad Serving Template) standard, which essentially creates measurement events. Publishers insert Kantar Media tracking pixels into the video campaigns that they sell direct to advertisers (as opposed to through an automated trading platform), and when the commercials are served, these pixels place a call to Kantar Media's systems.

This data, which also identifies the type of device on which the spot was played, is therefore independent of the publisher's ad server. Whilst the pixel integration is initially being carried out manually by the broadcaster, a system for automating this process is being deployed across publishers' ad-serving systems.

Following the identification process outlined above, the census and panel data are overlaid to create calibrated targets, which in a second stage results in: panel data with adjusted totals; and census data with demographics appended. This calibration process is outlined in an SKO document that can be found at http://bit.ly/SKO_technical.

// Moving towards an integrated measurement

At the time of writing this report, the online panel has been established, but there remain some issues to be resolved around implementing mobile census data collection and the extension of the census project to cover all broadcasters as well as all online-only video content. A number of important questions still need to be addressed, such as how to deal with programmatic campaigns. Calculation and reporting rules are available.

The next phase in SKO's project is to develop a combined measurement model that will deliver viewing figures for programmes across online and offline platforms. Currently, and until September 2015, reporting of television and online video viewing of TV programmes remains separate, and after this point combined online and offline programme ratings will be available. It is important to note that the new *viewing moment* reporting will give the performance of a publisher over a period of time, rather than the existing paradigm, by which reporting relates to the actual time a piece of content was broadcast. The move away from a measurement environment in which there are a relatively small number of broadcasters towards

one in which a larger and more unstable group of publishers – who may enter and leave the measurement over time – means that audience shares will no longer be published within the *viewing moments* report, as these will become less relevant for media planners. From January 2016, cross-platform campaign reporting will be available.

The new metrics will include; linear TV broadcast, independent of platform (TV, online); TV time-shifted viewing (<28 days); online time-shifted viewing (>2006); online viewing of online advertising campaigns; and online viewing of online-only content (for example, live streams of the Olympics, pre-views, etc.).

No agreement has been reached to date regarding a hybrid currency that will cover media planning, trading and billing. For television, the currency is Live +6 days viewing whilst for online video there will probably start to be a discussion on the market once SKO begins delivering data.



BAS DE VOS

MANAGING DIRECTOR

egta: *Can you explain how you handle the fusion of the online panel and census data?*

BdV: Essentially, we take the best of both worlds. The census numbers provide the total viewing, and to these we attribute panel information such as profiles, co-viewing and cumulative reach. In that way, we create calibrated targets. These are then used to correct the panel data by matching census totals, respecting profile and reach.

egta: *Do you treat smartphones and tablets in the same way within the online panel, with an identical login procedure for both types of device?*

BdV: Tablets are installed with a piece of sign-in software, so panel members need to log in whilst using the tablet. We see smartphones as single user devices, unless we detect two totally different patterns of programme types, which would indicate multiple users.

egta: *How do you see the future of television and online video reporting and currencies?*

BdV: We will start with individual currencies. That makes the most sense due to the fact that there are big differences in usage and commercial in-

terest in the two types of distribution. In due course, a cooperation in the online domain may first introduce a single data feed for online video, web browsing and reading behaviour. In the future, television and online video measurement will grow towards each other, initially starting to be combined at a small scale and later at a bigger scale. But there are no clear timelines for this.

egta: *Is a publisher's own server data sufficient for trading online video advertising?*

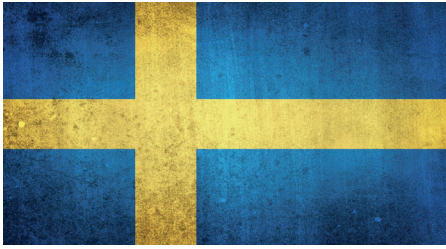
BdV: No, there should be an independent, controlled and harmonised standard in the market. This is something that comes with a more professional media environment.

egta: *Under a future measurement that accounts for a variety of online publishers alongside TV broadcasters, audience shares will no longer be as relevant as they are today; what impact do you think this will have on the way television and video are transacted?*

BdV: Trading, if done on audience shares, will no longer be stable and therefore not very usable, unless strict definitions on what TV is and what the market 100% is are made. Performance will probably be more measured in terms of audience reach, selectivity and time spent.

egta: *The Netherlands is probably the closest European market to launching a completely operational hybrid audiovisual measurement system; what challenges do you still need to overcome?*

BdV: There are a lot of challenges ... building a project towards a more complete market overview, getting more publishers into the measurement, getting the market to use the data, stabilising the project once it is really live. And all the normal challenges you have in the online domain, such as decisions made by the big tech companies, changes in operating systems, new devices.... It's a never-ending story that makes it challenging going forward!



SWEDEN

// MMS: The integration of measurements towards a total video currency

The stated aim of Sweden's television JIC, MMS, is to launch and maintain a fully accepted media currency covering all TV and online video viewing on all platforms, screens and situations. The organisation is working towards this *Total TV* solution, which is expected to produce its first figures in 2015 with the full model planned for 2016. The approach MMS is developing leverages a larger number of separate data sources than some other markets, such as the UK, and it will involve data fusion across the existing TAM panel, three online panels and two census-level sources to deliver *Total TV* viewing.

// A solution built around the TAM panel, census measurement for content and ads and online panels

Television audience measurement in Sweden has been carried out by Nielsen since 1993, using audio matching people meter technology. Census measurement of video content using comScore's Stream Sense was introduced in 2011 and census measurement of video advertising by Adobe in 2014, although MMS plans to move to a single supplier in the future, as this would make the hybrid model easier to operate. Using this census-

level data, MMS began publishing live + 7 days viewing figures of online video advertising for Sweden's television broadcasters in 2014, regardless of the platform on which it was accessed, and part of the organisation's vision is to extend the scope of the measurement to cover other publishers, for example YouTube and the paid-VOD services HBO Nordic, Viaplay and Netflix, as well.

The census measurement operates on the basis of *events*, which are created each time a viewer carries out some form of interaction with the video media player. Examples of events include starting, stopping or pausing a video. MMS can calculate viewing durations from this data, and publishers provide the organisation with the necessary metadata to identify the content.

The expansion of the measurement to other publishers will be achieved by the development of a new online panel solution. The panel is composed of three parts, the first two measuring desktop followed by mobile devices, with the third *detailed* panel providing increased scale. This third stage is to provide a panel that is big enough to deliver demographics at a detailed level, and it may end up being the existing panel or a different one. MMS's objective is to measure the length of viewing duration of online video on a daily basis, reach per channel or website, the demographics of the viewers of a particular piece of content, reach and frequency (GRP) for advertising campaigns, and reach (rating) for programmes and clips.

Stage 1: Desktop panel using browser plug-ins

Desktop panellists install a browser plug-in that records the user's activity on a daily basis, and this allows a much larger range of publishers to be measured without any need for them to integrate markers in their content. The plug-in solution used for this panel does not feature a login mechanism, and there is therefore some loss of quality in the data. Where a computer is shared between several individuals within the household, MMS can-

not identify which of these people is accessing a particular piece of video content. However, MMS is able to mitigate the risk of this to some degree, as it collects data about who within the household uses each desktop device. This slight loss in data quality is offset by the lower burden placed on panellists.

Stage 2: Mobile panel using tagging or proxy server

The mobile panel solution presents greater challenges than measuring desktops, and MMS is trialling two solutions to capture viewing on these devices. The first method is content tagging, which relies on code insertion on the part of publishers, and the second is a proxy solution that allows all activity carried out on a mobile device to be recorded. This latter technology is more comprehensive in scope, but it generates huge amounts of data, and it may be difficult to determine which data are relevant. It is the objective of MMS to persuade existing desktop panellists to also join the mobile panel.

Stage 3: Detailed panel to add scale

The third stage in the development of the panel measurement is to add scale. MMS refers to this as the *detailed panel*, and this may be achieved either by simply increasing the size of the desktop and mobile panels, for example adding some tens of thousands of new panellists, or it may lie in developing new partnerships for data sharing. At the time this report was published, work was continuing to resolve this question and a decision has not yet been taken.

// Future vision: *Total TV*

MMS is working towards a TAM model that brings data from the television, desktop, mobile and detailed panels together with census-level measurement for programmes and advertising using a data fusion model. The organisation is working with GfK to build the integration hybrid model, which cre-

ates a virtual total database.

There are a number of questions still to be addressed, including the measurement of simulcasts watched over cable operators' platforms, which are too small in scale to be accurately measured by the panel, digital ad insertion and programmatic advertising trading, which involves third party ad servers that can reduce visibility for the measurement systems.

MMS regards trust in the new currency as critically important, and the new methodology therefore needs to be open and transparent. MMS will retain the TV and online currencies, alongside its new hybrid total video currency, and how the market will use the data remains to be seen.

// A new trial of the Ipsos Connect MediaCell Peoplemeter

Alongside the work towards the new *Total TV* measurement, MMS is conducting a test of the Ipsos Connect MediaCell from July to December 2015 as a potential replacement for traditional people meters. The Household MediaCell Peoplemeter takes the form of a mobile tablet running an Android operating system, which uses audio matching and watermarking to detect viewing, with viewers identifying themselves on the device's touch screen.

This solution potentially offers a lower cost alternative to existing people meter technologies, and it – or similar techniques from other suppliers – could therefore allow the number of measured households to be increased if selected, in turn improving the accuracy of the measurement and the granularity of reporting audiences.

The Ipsos technology is also being tested by BARB in the UK.



egta: *Can you share any feedback on the trials of the Ipsos tablet-based audience meter?*

PS: It is working well, and we are receiving test data right now. The production system is really smooth and effective, and the installations have been working very well without technicians. We have extended the test period to be able to validate the data.

PIRJO SVEDBERG

EXECUTIVE VICE PRESIDENT

egta: *Can you explain the decision to include potentially all online video publishers in Sweden's new Total TV solution, rather than focussing just on television broadcasters as is the case in some markets?*

Pirjo Svedberg (PS): We have always been measuring all TV consumption, all channels and not only our clients. So when we decided to extend the measurement to other platforms, the only option was to include all players and sites with video content.

egta: *What is the reason behind using two partners to deliver census-level data – comScore for content and Adobe for advertising?*

PS: There is no rational answer. We did measure programs and clips with comScore, with good quality. When we decided to measure commercials online we decided to measure with Adobe – to learn more. Now we have plans to go for one supplier, as it is easier and requires fewer quality checks with one.



UK

// BARB: Project Dovetail

Project Dovetail seeks to measure all television viewing, regardless of the screen it is watched on or the means by which it is delivered. It is a unique approach, in that it uses a single source panel for measuring all viewing behaviour; the majority of hybrid television measurement projects elsewhere around the world maintain separate sources for broadcast and online viewing. Census-level data is delivered by metadata tags inserted by broadcasters, completing the hybrid methodology.

Delivered in a series of steps, the complete hybrid measurement solution is not expected to be operational and reporting currency data to the market before 2017 at the earliest.

// A single source panel for viewing data

BARB, the JIC for television audience measurement in the UK, operates a panel of 5,100 households across the country, representing approximately 11,500 individuals (aged 4+). Broadcast television viewing is measured using Kantar Media's PeopleMeter, which uses both audio matching and watermarking technologies, the latter being used to differentiate between the same content that has been broadcasted simultaneously on standard definition and high definition channels, for example.

In order to measure online video viewing, software

meters – also developed by Kantar Media – are installed on the desktop and laptop computers present in each panel household, and a measurement app is installed on tablets. Panellists are required to log in each time they use the device for watching content through TV player apps, ensuring that the number and identity of people accessing a piece of video content on a given screen – whether alone or collectively – is recorded just as it is for broadcast television viewing.

BARB may treat tablets and smartphones differently, as the pattern of consumption behaviour is assumed to differ between the two. Smartphones are essentially personal devices, which are typically used by a single individual only, whereas tablets may be used by several members of the household. The software used on smartphones is under development, and while it is technically similar to that used on tablets, the respondent experience is likely to be different given the more personal nature of smartphones. Further testing is required before a deployment plan is agreed.

The upgrading of the panel to include online viewing is a fairly lengthy process, as only newly recruited households are required to install the software meters and mobile measurement apps. Existing panel households are not upgraded to include online viewing, and they therefore report broadcast television viewing only. By October 2015, approximately one third of eligible broadband connected households have online viewing measured, and whilst a smaller sub panel of this nature is sufficient to start measuring online video, the level of detail is naturally quite low in the early stages of the project. This is as much a function of the level of viewing as anything else.

// Census-level data from metadata tags

Broadcasters in the UK are, at the time of writing this report, integrating a standardised Kantar

Media measurement component into their online TV media player software. This implementation stage highlights one of the challenges associated with extending TAM to include online video viewing: whereas broadcasters have traditionally had little active involvement in the measurement of their distributed content, the inclusion of online video requires considerably greater participation on their part. Not only does this increase the number of staff involved in the process, the issue is further complicated by the different player versions (browser, Android, iOS, Smart TV, etc.) that need to be maintained and updated over time. Whilst audited data is now being received from four broadcasters in the UK, there are other player versions that are either still being developed or are currently generating unaudited data to BARB.

One of BARB's key objectives has been to develop a credible, robust and transparent measurement methodology, and verification that the census-level data represents actual viewing is essential to this process. The system design has been audited by the ABC (Audit Bureau of Circulations), and it has been shown to be free of non-human and international traffic, with additional protections in place to prevent media owners from artificially affecting the reported viewing.

The Kantar meter measures programme viewing activity to the second, and the first data to be published will be device-level, without audience data. One of BARB's challenges is to define comparable metrics for online and offline programme viewing. A new average programme streams metric combines exposure and dwell time to provide a measure of average duration, and while this is a measure of devices rather than of people, it is analogous to the average audience numbers that the television industry is used to working with. In order for advertisers and media agencies to be able to compare the reach and frequency of linear and online/on-demand campaigns, BARB is also developing an equivalent metric for online commercials.

// The final phase: integrating the data sets to provide a new gold standard for the industry

BARB has commissioned two research organisations – Kantar Media and Nielsen – to develop prototype data fusion models, and these will be assessed during the first half of 2016. Whilst the fully operational hybrid TAM is not expected to be available until 2017 at the earliest, BARB released its first on-demand and live-streamed viewing data in the form of the weekly *TV Player Report* in September 2015. At this early stage, the data will reflect devices, rather than audiences, and the first reports are in beta format, reflecting the fact that not all broadcasters' player versions are included and that for some broadcasters live streaming is not included.

// The decision to work with a single panel for online and offline viewing

Project Dovetail's single source approach is regarded by many in the industry as ambitious, and BARB's Director of Research, Simon Bolus, admits that there may eventually be a limit to the extent to which a single source panel can measure mobile devices, for instance. However, the organisation takes the view that this approach is worth exploring in the first instance. The key advantage of using a single source for all viewing is that there is no need to find a statistical solution to match the panels for broadcast television and online video. However, there is an increased burden on the panellists, which may lead to issues in compliance and in recruiting and maintaining a representative panel. BARB has noted that whilst there has been a noticeable effect on agreement levels to join the UK TAM panel, and the churn rate is higher, these variations are within historical norms and are not considered to be an insurmountable problem. The organisation's experience has been that panellists

understand and accept the reasons behind their being asked to be measured across multiple devices.

The characteristics of the population eligible for television measurement – historically those living in households that own at least one television set – have started to become gradually less representative of the UK population as a whole, as the proportion of houses that do not own a TV set has increased. However, people in these households may access broadcasters' TV content through other platforms, such as the BBC iPlayer, ITV player or All 4, for instance. Such households, which tend to comprise of younger people, are currently not included within the TAM panel, and BARB has therefore started to recruit a separate sample of non-television owning households. These households may be integrated with the existing TAM panel in the future in order to make the universe that is used to report television against become more representative of the UK population.

// The expected future currency or currencies

The delivery of standard audience metrics for on-demand advertising is predicated on the data being for planning purposes. There is no agreement yet on whether any of the new data should influence the trading currency data produced by BARB.



US

// Nielsen: the provider for television ratings in the US

The television ratings service in the US is delivered by Nielsen, with electronic measurement across the national service, as well as the top 56 local markets. The most commonly used metric for national television advertising is the Average Commercial Minute Rating, introduced and agreed upon by the industry in 2007. This standardised measure for commercials averages all minutes of the program that contain national commercials from the live telecast out to 7 days of viewing, either via playback or on-demand. The most common metric currently is referred to as “C3” which includes up to 3 days of viewing, but “C7” is becoming more and more popular.

The Average Commercial Minute calculation and the “C3” metric was arrived at based on industry consensus, and requires consistency in the commercials included. Nielsen is working with a number of clients to increase flexibility around the metric as the industry explores new approaches to leveraging extended delivery windows and more targeted advertising delivery such as dynamically inserted advertising.

Nielsen also produces program content ratings and accounts for all time users spend watching television from any source. Nielsen is working towards a *Total Audience* solution to extend audience measurement beyond the distribution channels

and viewing patterns that are currently included in its traditional ratings, including a wider range of mobile and digital devices, dynamically inserted advertising and viewing that has been delayed for longer than seven days.

The company is developing a hybrid methodology that is built on data from its people meter panel alongside big data from partners, such as Roku, Facebook and Experian. Nielsen states that its partnership with Roku, a popular streaming platform with some 10 million devices currently in use, is an industry-first for over-the-top (OTT) devices, as it will allow marketers to buy video advertising on the Roku platform with the same audience guarantees that are available for traditional television. Under the collaboration with Facebook, the two companies exchange anonymised data in order to append demographics to census-level viewing data for video. The information Facebook receives identifies shows by a numerical code, rather than the show's title, meaning that Facebook does not know *what* is being watched. Conversely, Facebook sends only anonymised age and gender data back, and therefore Nielsen does not know *who* was watching, but it can build a demographic profile for the measured content and advertising.⁷

// TV in the US: under pressure from shifting viewing behaviours

Television companies, both broadcasters and cable companies, are facing significant challenges in the US. Measured viewing of live +3 days (represented as the C3 rating, which is commonly used for trading) is undoubtedly declining. Whilst not directly related to the issue of viewing figures, it has been reported that cable subscriptions fell for the first time in 2014.⁸ As the industry has analysed these data, it becomes evident that the largest impact comes from other viewing options on the set, including subscription-VOD. Data from Nielsen shows a consistent year-on-year decline in the amount of traditional television being watched,



BRIAN FUHRER

SVP, NATIONAL & CROSS-PLATFORM PRODUCT LEADER

egta: *What is your vision for effective audiovisual measurement across all screens and devices in the future?*

Brian Fuhrer (BF): Nielsen's vision for comprehensive measurement comes together in a framework we are calling "Total Audience." Simply put, the *Total Audience* approach will include the measurement of video consumption regardless where, when, or how it is accessed, for all underlying business models. We are committed to pursuing this on behalf of our clients, and they have enthusiastically endorsed our strategy. Nielsen's *Total Audience* framework will utilise the best and most appropriate metering techniques and data sources, calibrated by our high quality panels.

egta: *What is the current state of development of your next generation measurement solution?*

BF: We are very excited by the advancements we have made. Critical milestones have been achieved in the over-the-top, computer, and mobile measurement, and major reporting and back-end enhancements are slated for the end of this year (2015). A syndicated, competitive view will start to roll out in early 2016.

egta: *What do you believe to be the most significant challenges to be overcome?*

BF: The first major challenge is achieving industry consensus on any currency-related change. In our industry there are many different companies with varying (and sometimes conflicting) opinions, and we must give them all serious consideration, as any changes to the currency can have a major impact on their business. The second challenge is more technical in nature, as many of the digitally-oriented solutions require client software integrations that are seamless once completed, but do take some initial focus.

egta: *Do we need a single currency, or separate currencies for programmes and advertising?*

BF: This decision will always be driven by what the industry wants to endorse and utilise. It is clear that clients want to be able to track their advertising and programs and do so independently of what the actual business model might be. They key benefit here, and one that truly fuels our *Total Audience* strategy, is the flexibility that measuring at the advertising level provides (particularly across platforms) and the new business opportunities that it contains for our clients. Separate currency for programs versus advertising creates a disconnect during the planning and posting process, so having them all measured within the same framework is critical.

egta: *What do you expect the measurement landscape to look like in two years?*

BF: The drivers for measurement will be fragmentation, and the opportunities that more precise and informed advertising will provide. Because content and advertising distribution opportunities will continue to grow, measurement will also need to be more granular to accurately reflect that delivery. Overall context is key, and expanding the behaviours, attributes and characteristics collected in our panel homes to include digital census-based measurement will be required to report *Total Audience*.

especially by younger people, and an increase to other television options. As a demographic group, only over 65 year olds watched more traditional television in Q1 2015 than in Q1 2011; all other age groups watched less. This is particularly noticeable for 18-24 year olds, with average weekly viewing per individual in this population falling from 26 hours and 28 minutes in Q1 2011 to 18 hours 4 minutes in Q1 2015.⁹

This pressure on viewing figures has been reflected by the stock market valuation of some American television companies; Viacom, Inc. (VIA), for example, saw its share price halved in the year to August 2015, and CBS Corporation (CBS) lost one quarter of its value. By comparison, Netflix, Inc. (NFLX) increased its value by more than sixty per cent over the same period.

Some media executives have criticised Nielsen for not adapting as quickly as necessary to reflect the changing pattern of viewing, particularly amongst younger audiences. Viacom's CEO Philippe Dauman has been especially vocal, claiming that the measurement in place has not kept pace with younger people's changes in viewing behaviour, which is

“Some people use the term hybrid, I like to think of it as augmentation. We believe that a high quality sample is absolutely critical as a foundation to augment with additional data.”

Brian Fuhrer

SVP, National & Cross-Platform Product Leader

Nielsen

increasingly moving onto unreported smartphones and gaming consoles. Viacom is planning to shift the balance of its revenues towards digital advertising, targeted ad insertion and sponsorship, making it less reliant on ratings for its income.

However, until effective measurement of all devices and screens is in place, it is difficult to determine how much of the change in viewing figures is due to unreported devices and how much is due to other factors, such as OTT viewing and other, non-video related, digital activities. In findings that suggest changes in measurement will not necessarily solve the whole problem of television's falling audiences, analysts MoffettNathanson estimated earlier in 2015 that Netflix represents almost 6% of all television viewing in the US, and that the company is responsible for 46% of the drop in traditional TV viewing seen in the first quarter of 2015.¹⁰

Furthermore, Nielsen has pointed out that the existing C3 metric (defined by the industry) only includes a subset of viewing, although they do report much broader information. A set of rules agreed by the industry in 2006 requires Nielsen to count only viewers for shows that originate on TV, that have been seen within a certain number of days (live, three or seven), and when watched on a non-TV platform it must contain exactly the same advertising load as when first broadcast. Nielsen has called on the industry to revisit the rules around eligibility to allow the evolution to cross-platform television measurement to progress.

// New actors active in television and cross-media audience measurement

The changing nature of television and video consumption, and the increased availability of RPD from set-top boxes and connected devices, has led to a number of other companies becoming involved in the supply of television audience insights.

// comScore: from digital analytics to cross-media measurement

One such company is comScore, which has earned a place as one of the leading actors in the digital analytics space. In the US, comScore has developed panels and technologies to measure digital consumption, including video and advertising, on all platforms, including smartphones, tablets, Smart TVs, gaming devices, OTT apps and desk-top/computers. Since 2011, comScore has been developing a cross-media measurement service, starting with an initiative in collaboration with US television industry organisation CIMM, the Coalition for Innovative Media Measurement, then expanding with measurement for ESPN known as *Project Blueprint*, to provide continuous unified measurement of media usage on a national scale across TV, radio, desktop, smartphone and tablet.¹¹ Several other major broadcasters and media agency groups are now involved. The radio measurement company Nielsen Audio (previously Arbitron) was also one of the initial partners in *Project Blueprint*, and as part of a deal negotiated after Nielsen's acquisition of Arbitron, comScore licences television and radio data from Nielsen Audio's PPM panel. comScore now offers a syndicated measurement service under the name *Xmedia*. comScore released the first cross-media data to eleven member companies of CIMM in the second quarter of 2015 and has published a white paper of the results that can be found at www.cimm-us.org.

// Rentrak: deriving census-like data from the set-top box

Rentrak, a company with roots in the measurement of cinema box office sales and home video sales and rentals, has become an increasingly important actor in the measurement of television content, both VOD and live viewing. The primary

data source is television set-top boxes, of which the company claims to include more than 16 million households across the US in its *TV Essentials* measurement service. Rentrak also offers a mobile television measurement service. As it uses census-like data and does not operate panels, Rentrak works with a number of big data suppliers to provide household demographic information, and it also combines viewing data with third-party consumer behaviour data to offer additional insights to advertisers.

Rentrak data has been particularly valuable for stations in smaller US local markets, where the official currency measurement is carried out by diaries rather than electronic people meters and reported four times per year.¹² The use of RPD from large numbers of set-top boxes offers lower volatility and faster data delivery than can be achieved through diary panels. Whilst it is normally regarded as a complementary service to – rather than a replacement for – Nielsen ratings, Rentrak has signed deals with major broadcasters, such as ABC, CBS and Fox, local TV broadcasters and media agency groups. However, it should be noted that in May 2015 Rentrak failed to gain accreditation for its national and local TV ratings from the Media Rating Council (MRC) following a year-long auditing process.¹³ Whilst not a pre-condition for use as a TV marketplace advertising currency, MRC accreditation is seen as a stamp of approval that gives higher confidence in a measurement service. Rentrak has announced that it would address the issues identified by the MRC before a second audit is undertaken (Rentrak is already MRC accredited for census-based VOD and box office ratings). In 2014, WPP Group took a stake in the company as part of a \$98 million deal that saw Rentrak acquire Kantar Media's US-based TV measurement assets¹⁴, and in September 2015, it was announced that comScore and Rentrak were to merge in a deal that valued the latter company at \$752 million.¹⁶



comScore.

JOAN FITZGERALD

SVP TELEVISION & CROSS-MEDIA SERVICES

egta: *What is your vision for effective audiovisual measurement across all screens and devices in the future?*

Joan FitzGerald (JF): comScore's vision is to make audiences and advertising more valuable. We provide the marketplace with effective audiovisual measurement across all screens and devices to achieve this goal for our clients, at scale.

Our measurement services support the most crucial areas where clients make their investment decisions and operationalise their advertising, including Media Planning, Activation and Effectiveness.

egta: *What is the current state of development of your next generation measurement solution?*

JF: comScore *Xmedia* is available as a syndicated audience measurement service in the US today. comScore combines radio into cross-platform consumption through our *Blueprint* initiative. In addition, comScore measures advertising campaigns on a cross-platform basis, measuring the unduplicated reach, GRPs/TRPs, impressions and frequency across TV and digital platforms.

comScore has innovated on cross-platform sales lift analytics as well, developing multi-touch attribution methodologies that leverage 'single source', consumer-centric data to measure the impact of television, digital and combined TV/digital advertising on brand sales and brand attitudes.

Outside of the US, comScore recently announced a strategic alliance with Kantar, which will enable comScore and Kantar together to reach out to stakeholders in individual (non-US) markets, with the opportunity to introduce cross-media measurement in those markets. The collective aim is to provide coherent cross-media measurement of audiences and campaigns, to reduce duplicative R&D resource, to share knowledge and experience as well as to provide efficiencies in technology implementation overhead on the part of media owners. For the latter, for example, the organisations have tested and confirmed the mutual usability of census measurement tags to lessen the requirement from media owners to implement two sets of tags.

Currently projects are underway in several European countries at different stages of development.

egta: *What do you believe to be the most significant challenges to be overcome?*

JF: The most pressing challenge in the television measurement world today is that television viewing has 'escaped' the television set and needs to be measured across all platforms – MVPD, DVR, SVOD and devices such as gaming devices, smartphones, tablets and OTT.

comScore created *Xmedia* and is partnering with Kantar because our clients have told us that they need solutions now that will help them measure the complexities that come along with the ever-changing way that people are consuming content thanks to the digital world. With better data and technology, linear TV along with *Total Video* in all of its forms can be measured for the benefit of both

advertising buyers and sellers.

egta: *Do we need a single currency, or separate currencies for programmes and advertising?*

JF: comScore provides objective, third-party measurement across platforms – wherever and whenever content or advertising is consumed. What's important is that buyers and sellers agree up front to the metrics used to transact, and those metrics must come from a neutral, consistent and reliable source. Common metrics are crucially important for marketers and their agencies to make decisions about how to allocate their advertising investments. Programme measurement and advertising measurement need to work from the same measurement foundation. The foundation of video measurement, whether programmes or advertising, is the answer to three questions: *how many*, *how much* and *how often*. *How many* means unduplicated reach. *How much* means impressions for advertising and minutes for programmes. *How often* means frequency for advertising and viewing occasions for programmes. These foundational measurements are required whether we are measuring programmes or advertising.

egta: *What do you expect the measurement landscape to look like in two years?*

JF: With the launch of *Xmedia*, comScore has made cross-platform measurement a reality in the US. We will continue to partner with media companies, publishers, advertisers and agencies, both in the US and on a global basis, to continue to make the metrics that fuel true cross-platform advertising buying, selling and evaluation a standard part of the work flow. As audiences go cross-platform, measurement is there to provide insights, understanding and the framework for monetisation.

In September 2015, Rentrack struck a partnership with the American entertainment company AMC Networks to develop a cross-platform measurement initiative for TV programme viewing. Intended to better understand how audiences use television and VOD platforms by demographics, the project will integrate Rentrack's TV and VOD data with census-level data collected from AMC Network's digital platforms.¹⁶

// Cablevision: leveraging first-party, census-level STB data

Innovation in the field of TAM is not restricted to audience measurement providers or analytics and research companies, as demonstrated by an audience data and analytics agreement between Cablevision Systems Corporation and ESPN announced in May 2015. Cablevision – one of the leading cable TV providers in the US, serving about 3 million homes in the New York television designated market area (DMA) – will allow its first-party set-top box data to be used to match ESPN impressions with sales data and other relevant information to accurately determine value, demonstrating ROI to advertisers.

Talking to Adweek, Ben Tatta, President of Cablevision Media Sales, explained that *"the ultimate goal in this is really to measure advertising ROI and the value of the ESPN impression across platforms."*¹⁷ The deal extends to the broader Walt Disney Company, and both companies have stated that they are interested in making similar deals with other broadcasters and multichannel video programming distributors (MVPDs) respectively in the future. More recently, Cablevision announced that it had received a patent for an audience measurement and analytics system, which is used for capturing, synthesising and running analytics against viewing data at the set-top box level.¹⁸ Both this system, and the deal between Cablevision and ESPN, ensure that audience data is used in a secure, anonymised and privacy compliant manner.



KANTAR MEDIA

RICHARD ASQUITH

GLOBAL CEO

AUDIENCE INTELLIGENCE AT KANTAR MEDIA

egta: *Can you explain what technology Kantar Media is deploying for the online video element of hybrid AV measurement?*

Richard Asquith (RA): We are tackling it from two directions. On our panels, we are using the Kantar Media online PeopleMeter, installed onto the panellists' devices, which allows them to register when they are watching TV content on the device. Importantly, we need to know who in the household is using the device, because many devices are shared, and we need to know who is making choices over what to watch.

And from the other end, we are also embedding our advanced tagging onto the web players that are delivering content to the audiences. We are monitoring when a device has made a request for content, for example to the BBC iPlayer for BARB in the UK, we know what has been requested, whether it's been streamed live or whether it's been downloaded and watched later, we know when the consumption of that stream has started and when it's finished, if it's stopped mid way, if people are rewinding. All of that information allows us to produce granular census data, so we

know at a device level what is being viewed.

We can then fuse the census data with our online PeopleMeter data on the panellists' devices and, by constructing a sophisticated model that links these two data sets together we ensure our clients have the best of both data sets.

egta: *Could you comment on the methodological pros and cons of the two alternative approaches to panels – either a single panel or separate panels for TAM and online data?*

RA: In technical terms, the advantage of having a true, single source measure is that you can be absolutely confident that you know what an individual is doing on all of these different platforms and devices. And you can use that learning, that knowledge, to inform your models when you are bringing in census data from sources such as via the return path from set-top boxes.

The challenge, and the reason for not doing it as single source, is that it's difficult to ensure 100% panellist compliance.

So there are pros and cons – you build a better model, you have this better understanding of duplication, but the question remains over how compliant and representative these panellists are. There's no right or wrong answer here, it's just that different markets have chosen to explore different routes.

egta: *On the compliance side, have you been able to draw any conclusions on compliance when panellists are asked to do more?*

RA: It's a truism in research that when you ask people to do more things it inevitably has an impact on their compliance, and there is no getting away from that. The question is, is it manageable and do we know enough about the way they are behaving for us to control for it? We believe that we do.

It's also a fact that research participants are generally less compliant than they were ten years ago. There's too much competition for people's time. We are continually working on our techniques to maximise compliance, and where we do have gaps in the data, we know enough to fill those gaps in. So, it's a continual challenge and an evolving process.

egta: *To get an accurate picture of video consumption, does an online panel need to be roughly equivalent size to a TV panel, in terms of the size of the population?*

RA: Generally speaking, the larger the panel the better, but you get diminishing returns. If take the best of both worlds (panel and census) then our view is that you don't need to have an exceptionally large panel in order to operate a representative, accurate television measurement service. You need to have a minimum size in order to be able to create those connections, for us to be able to draw distinctions between the different demographic groups and identify duplications, but it doesn't need to be enormous to make this happen. We are in a process of learning, but as a rough guide we probably need a panel in excess of a thousand to make this work in most markets.

egta: *Are you covering all device types and operating systems at the moment, or are there any dark corners? Can you truly capture viewing on any screen?*

RA: In principle, any screen, but what's happened in all of the markets is that there has been a progressive roll out. What has tended to happen is that we have started with the TV screen and then moved on to PCs, Macs and laptops. After that we've moved on to tablets and then smartphones. For example, our measurement solutions have been deployed by BARB in the UK: initially desktop and laptop computers and, in 2014, extended to viewing on iPad and Android tablets. It's important that we distinguish between the screens that are used to consume and the platforms that are

used to deliver that content. We can measure any screen, but increasingly we need cooperation from the providers allowing us to tag or watermark their content and, sadly, this cannot always be guaranteed.

egta: *Turning to people meters, do you see these as remaining the core technology backbone for TV measurement?*

RA: PeopleMeter technology will continue to be the foundation of any television measurement currency. And I say that because, although the world is undoubtedly changing, everything that we've seen points to traditional TV viewing on the biggest, high definition TV set in the home continuing to dominate for many years to come. So any system has to measure that as well as it possibly can. And that is done through people meters. Not to say that other elements of the system won't supplement that, there will be other components, but our expectation is that people meters will play an important, core role in measurement for the foreseeable future.

egta: *And would you expect that the use of RPD from set-top boxes will become an increasingly important complement?*

RA: Yes, I would say so. But with RPD, whilst you know about the devices and when they are running, what you don't know is who is in front of the TV set watching it, and you don't know if that device has been left on after the TV set has been switched off. You need people meter panel data to interpret the RPD.

egta: *Things are changing so quickly. Device consumption is rapidly changing, as is the product offer. How do you balance a very fast changing environment with the need to have a robust and well developed measurement system?*

RA: It's not a new problem, in the sense that things have always changed, for instance with the arrival of satellite television and the proliferation of chan-

nels, but it's probably a growing issue. The fact is there is a tension there between on the one hand the need to have a proven currency that everyone trusts and then reflecting the fact that world is changing, we have to adapt, and new components of the currency will have to be required. It's steering a course between the two.

The one thing that sometimes does get lost in all of this is that people get very excited about change. We talk about iPhone take-up and the advent of the iPad, and undoubtedly more people are consuming Internet delivered TV, but it is still a very small proportion of the total. On the one hand, we have to work very hard to understand how to measure this new behaviour and to start the process of getting the technology in place, but on the other hand not go so fast that you lose sight of the true scale of these changes in the grand scheme of things.

egta: *What's your perception of how confident media buyers are in television measurement?*

RA: I think there is still a great deal of confidence in the main currencies, this is very high. But I think it is undoubtedly affected by perceptions of measurement of the new devices and new platforms. We, along with the industry and the JICs, have to be seen to be pushing forward with measurement of these other means of consuming TV, or else we do risk undermining that confidence.

egta: *Kantar Media does a lot of work around social media; what do you think the significance of that will be in the future? Will it be about broadcasters understanding interaction with their audiences better, or could it become either a form of currency or part of the TV currency?*

RA: My view is that it's a parallel, complementary measure. It is very definitely not a replacement for audience ratings in the current form that we know it. It's about understanding engagement, interaction; we've shown with the work that we've done

that social TV activity can change people's viewing behaviour to a degree. But it works differently for different genres of programming, it's much more of a qualitative view of the audience. For programme makers and content providers, it provides very immediate insights into the ways that people are reacting and engaging, but it's not a replacement for audience ratings.

GLOSSARY

Census measurement

In the framework of audience measurement, census measurement refers to the complete collection of consumption data for a particular piece of content or advertising across potentially its entire distribution. Also known as machine data or return path data (RPD), census measurement is in contrast to sampling, usually carried out within panels, which collects data from only a subset of users and/or devices. The census may, however, include all measureable usage from either a sample of users or all users.

CPT

Cost Per Thousand, also known as CPM (where M stands for the Roman numeral for thousand). Indicates the cost of an advertising exposure to a thousand contacts. Often used to compare the prices of different media.

Formula: Total cost ad-campaign / # contacts (000)

GRP

Gross Rating Point, the sum of all rating points for a particular set of media events – programmes, advertising spots or ad breaks, etc. 1 rating point is equal to 1% of the total audience.

Formula: % Reach X Frequency

IAM

Internet audience measurement, the various techniques and methodologies for analysing online activity. Most European countries now have a JIC or MOC model for IAM, and the relative complexity of measuring digital activity – in contrast to television, radio or print audiences – means that device and platform coverage varies between markets. IAM often involves a hybrid solution built around panel and census-based measurement techniques, however in many cases there is no operational integration between the data sets.

JIC

Joint Industry Committee, an independent body representing all interested parties, including publishers/broadcasters, media agencies and advertisers, that commissions and oversees audience measurement. JICs typically engage private research companies to carry out fieldwork, analysis and reporting.

MOC

Media Owner Committee, also sometimes referred to as Media Owner Contract, an organisation set up by one or more broadcasters/publishers to commission research from a research supplier. Media agencies and advertisers may be represented.

Panel measurement

Representative survey sample from which data is collected over time. Panels may be short term and employ discrete one-off samples (e.g. some diary surveys) or continuous and long term with samples that change over time according to the number of homes that leave the panel and are replaced by new homes. All peplemeter panels are continuous and long-term.¹⁹ Panel data provides demographic information about viewers and users, but statistical modelling is required to estimate total usage.

People meter/PeopleMeter

A fixed location electronic device, consisting of a set meter and a component that registers who within the household is watching, that measures all viewing activity on a television set, using – among other possible solutions – audio matching and/or watermarking technologies or a combination of the two. People meters are deployed in household panels, and demographic user data is collected by the use of a remote control or other input.

PPM

Personal People Meter, the trade name for a proprietary electronic measurement device developed

by Arbitron (now Nielsen Audio). The PPM is designed to be carried by an individual panellist, and it records media exposure both inside and out of the home. It is most commonly used to provide ratings currency for radio, although its use is extended to television and, in some cases, print measurement. A number of other portable electronic measurement devices, in the form of wearables or smartphone apps, also exist.

VirtualMeter

A software meter developed by Kantar Media, which uses audience measurement technology derived from the company's PeopleMeter. The VirtualMeter is installed locally on panellists' Internet-connected devices, allowing TAM services to be expanded to include online video viewing. Other measurement companies have also developed software meters, including comScore, Adobe and Nielsen, among others.

TAM

Television audience measurement, a data supplier system/service for measuring television viewing and delivering audience data. TAM is typically carried out using a panel of households selected to statistically represent the television viewing population, using fixed or portable people meters. Depending on the country in question, TAM may variously be used to describe the measurement, the JIC and/or the company carrying it out.

COMPANIES

AGF

Since 1988, AGF has been the contracting authority for continuous TV research in Germany. In addition to its broadcaster partners, licensed TV stations, advertisers and advertising agencies participate actively in organizing the AGF research system.²⁰

BARB

BARB is the JIC for television audience measurement in the UK.

comScore

comScore is a technology company that offers marketing data and analytics to enterprises, agencies and publishers. Its assets include an opt-in panel of 2 million individuals and a census network.²¹ comScore announced a strategic alliance with Kantar in 2015, covering territories outside of the US.

GfK

GfK is an international research company with headquarters in Germany and operations in more than 100 countries. GfK is contracted to carry out TAM in several European markets.

Ipsos

Ipsos is a global research company, with headquarters in Paris. The company has developed both portable and fixed location people meter technologies.

Kantar

Kantar is the data investment management division of WPP and one of the world's largest insight, information and consultancy groups.²² Kantar Media offers a range of media insights and audience measurement services through the analysis of print, radio, TV, internet, cinema, mobile, social media, and outdoor.

Médiamétrie

Médiamétrie is both the JIC and the operator for television audience measurement in France. The Médiamétrie-eStat division has been measuring site-centric online activity since 1997.

MMS

MMS is the JIC for television audience measurement in Sweden. Since 2011, MMS has measured web TV.

MRC

Established in the early 1960s, the Media Rating Council is an organisation that has the objective of securing for the media industry and related users *"audience measurement that is valid, reliable, and effective"*.²³ The MRC sets standards in audience measurement and conducts audits to ensure compliance, and it offers accreditation to audience measurement service providers in the US.

Nielsen

Nielsen is a global information and measurement company, with operations in over 100 countries. Nielsen provides television measurement services to a number of European JICs, and it is responsible for the television ratings service in the US.

Numeris

Numeris is a not-for-profit, member-owned tripartite industry organisation, responsible for measuring television and radio audiences in Canada, using a combination of PPM devices and diaries.

SKO

SKO is the JIC for television audience measurement in the Netherlands.

TNS

TNS is a leading research organisation with operations in more than 80 countries. TNS conducts TAM in several European countries, including in the Nordic and Baltic regions. Following its acquisition by WPP, TNS is now a part of Kantar Group.

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ACKNOWLEDGEMENTS

egta extends its thanks to the individuals and companies that provided information and expertise for this publication, as well as their colleagues who supported egta in many ways.

egta would like to thank Kantar Media in particular for the company's support for this report.

This publication has only been made possible through the contributions of:

Richard Asquith (Kantar Media), Simon Bolus (BARB), Jane Clarke (CIMM), Laurence David (Médiamétrie), Bas de Vos (SKO), Lisa Eaton (Numeris), Joan FitzGerald (comScore), Sonya Ford (Nielsen), Brian Fuhrer (Nielsen), Knut-Arne Futsæter (TNS/Kantar Media), Jan Isenbart (Mediengruppe RTL Deutschland), John McCarthy (Kantar Media), Ivor Millman (independent consultant), Julien Rosanvallon (Médiamétrie), Justin Sampson (BARB), Robert Schäffner (Mediengruppe RTL Deutschland), Pirjo Svedberg (MMS).

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With thanks to:



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Further information and advice for television sales houses can be found in egta's 2014 publication *egta guidelines for the future of audiovisual audience measurement*.

This report is available on request.

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