

MULTISCREEN FOR EVERYONE



MULTISCREEN FOR SMALLER MEDIA COMPANIES | LOW-RISK DEPLOYMENT AND OPERATIONS

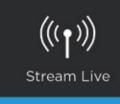
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INTRODUCTION

Multiscreen viewing, including OTT content delivered via connected STBs, is becoming a mainstream pursuit, enjoyed by older as well as younger viewers. Nevertheless, it is the 'digital-first' consumers who are setting the agenda for media companies who need to deliver content in new ways, like short-form and clips, and in new places,



like social media sites, as part of their increasingly complex distribution strategies.

This report considers how smaller media companies can harness new operations paradigms, refined live-to-VOD technologies and easier ways to syndicate content in order to be effective multiscreen TV players. It looks at how multiscreen deployments are becoming affordable for everyone and considers how smaller content owners and platform operators can use advertising to monetise their OTT and multiscreen efforts. I hope you enjoy it. •

John Moulding, Editor-in-Chief, Videonet

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Smaller media companies need to extend their reach, including through short-form and social syndication, and monetise content effectively, including with full mid-roll ad loads.

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Nobody wants to wait for content anymore so you must turn linear television into on-demand assets faster, whether for online start-over or clips.

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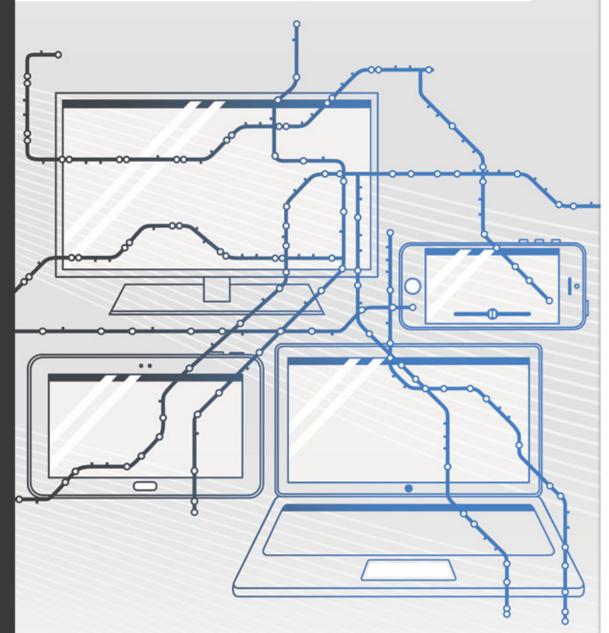
Create a user database to prepare for ad targeting with TV-like ad loads, and make ad revenues via syndication if you lack the scale to attract advertisers directly.



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SPONSOR'S INTRO:Multiscreen for Everyone

By Matt Smith, Chief Evangelist, Anvato



There is no mistaking the movement. Video consumption is exploding. We sit at the precipice of a massive growth period that will continue to affect the ways in which we produce and consume video for several years to come.

"Traditional television" is racing to adapt and reach new screens, while aligning the business models through which they reach viewers. Content and providers are going direct, while service providers are looking at newer, 'skinny' bundles, and new content creators seek their paths to viewers. Regardless of the type of video service provider and the business models they are considering, it all boils down to one concept. As Captain Quint famously said in Jaws, "We're gonna need a bigger boat."

In this sea of options, our boat assumes a few forms. From a consumption point of view, there has never been more choice. From a production and aggregation standpoint, the stakes haven't been higher. It seems that every month, more programmers and service providers announce intentions or general availability of an

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OTT service or product. They're moved from a stance of "one day we will build it" to "how fast can we deploy?" The good news is that technology and platform offerings have responded with new and innovative approaches to OTT delivery, and that the complexity and uncertainty

that accompanied deployments just months ago have disappeared in favor of reliable, enterprise-grade, cohesive solutions.

Fear not, fair reader. This isn't a nightmare scenario, and bringing these experiences to bear isn't as hard as it seems. For the larger programmers, operators and service providers, building these services and offerings generally involves internal resources who engineer the software that interfaces with the necessary components that comprise an OTT service.

For smaller organizations though, designing, building and deploying these services can appear quite daunting. They struggle with identifying all the necessary components -- from signal acquisition and encoding to media preparation through to application design and development, and finally CDN delivery to the end user. Often times, these tasks are placed on the lap of someone whose job also entails general IT work inside the organization. For them, these challenges can seem insurmountable and envisioning a true OTT offering for customers who clamor for them seems like a real world Mission Impossible.

The good news is that today's marketplace is one in which true signal-to-screen video supply chain solutions really exist. No smoke and mirrors, no slide ware without an available and shipping product. The task of concatenating disparate and disconnected components to form a solution is no longer the challenge. Today's hurdles are driven by how much an organization wants to own the process versus potentially outsourcing operation of these video supply chains. In this report, you will arm yourself with concepts and ideas to help drive decisions around how to successfully build a go-to-market strategy to navigate today's exponentially growing video space.

Matt Smith is chief evangelist for Anvato. For more information about Anvato's OTT platform, visit www.anvato.com.



MULTISCREEN FOR EVERYONE

How mid-sized and smaller media companies can deliver compelling multiscreen services that meet the needs of the 'digital-first' youth demographic and the wider OTT viewing public. BARRY FLYNN explores the new operations paradigms that are reducing barriers-to-entry, the user experiences that must be delivered, how to exploit syndication and the best ways to monetise content with advertising.



WHY EVERYONE NEEDS TO OFFER MULTISCREEN SERVICES

"TV as a platform is changing out of all recognition. TV used to be one device and one source. Now, the average household has six different devices to access video content and from at least five different sources. Increasingly, our viewers expect to be able to view what they want to watch when they want to watch it."

These are the words of James Currell, Chief Operating Officer of Viacom International, speaking at the recent Connected TV World Summit in London. But they could have been uttered by any other senior executive of any other large player in the video content business, wherever located in the TV value-chain.

The evidence for online video becoming more mainstream by the day is overwhelming. According to research consultancy Ampere Analysis, a staggering 37% of US homes now claim that online video is their main way of watching TV and movies – and nearly one-third of homes in the UK, Italy and Spain say the same, clearly showing that online video delivery is already a significant contributor to the in-home entertainment mix (see Figure 1).

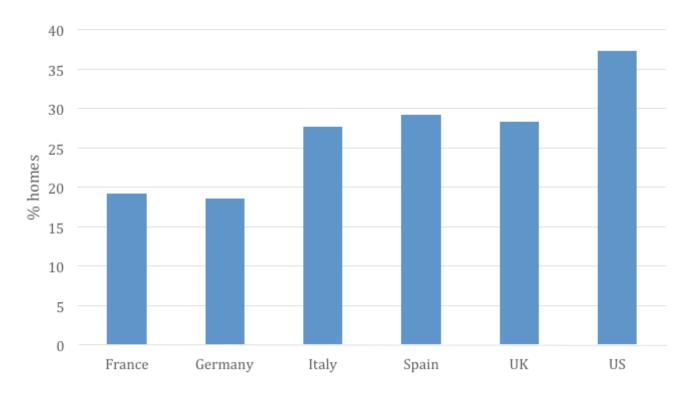
These 'digital-first' video consumers are pushing up the total amount of daily 'non-linear' viewing. Although there are differences in how such 'non-linear' viewing takes place and for how long, Ampere Analysis' data shows that a growing amount



FIGURE 1 - PERCENTAGE OF HOMES FOR WHICH ONLINE VIDEO IS MAIN WAY TO WATCH TV AND FILM

Source: Ampere Analysis

'DIGITAL-FIRST' VIEWERS SKEW YOUNG, AND SHOW AN INCREASING PREFERENCE FOR USING SOCIAL MEDIA AND WATCHING SHORT-FORM VIDEO CLIPS



→ of time in all countries is now spent away from the living-room TV display and the broadcast schedule: in both the US and UK this now exceeds an hour each day (see Figure 2).

'Digital-first' viewers skew young, and show an increasing preference for using social media and watching short-form video clips. In May, regulator Ofcom published findings showing that 93% of UK 16-24 year-olds have a social media profile, compared with just 54% in 2007. In the same report, Ofcom found that 65% of 16-24-year-olds now watch short video clips at least once a week online, compared with 43% in 2007¹.

Not surprising, then, that in his conference comments, Currell

revealed that Viacom was increasing its investment in short-form content, and explained how the media firm was using it to seed social media sites in the hope of bringing younger viewers back to its traditional linear properties.

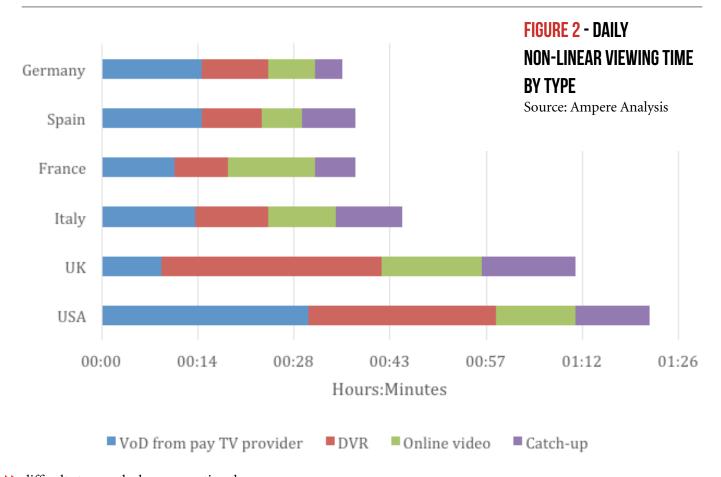
Other broadcasters targeting a younger demographic are taking similar measures. UK broadcaster Channel 4's new unified online portal, All 4, now has a dedicated 'shorts' area on the home page, where it also carries video clips about forthcoming programmes — all designed to drive viewers back to linear broadcast properties such as its hour-long scheduled evening news programme Channel 4 News.

The over-arching threat is that

this group – if not other, older demographics – might eventually abandon broadcast TV altogether. Ampere Analysis found that nearly half of US homes across three age groups (18-24, 25-34 and 35-44) believe their household may not need broadcast TV within five years. In Europe nearly 30% of homes across the same three age groups think the same (see Figure 3).

Guy Bisson, Research Director at Ampere Analysis, notes that one of the key issues is that while TV advertising is back in a growth phase, online is growing much quicker. "So you do need at least to have your finger in that pie and at least try to be targeting that audience. The younger audience in particular is very, very





difficult to reach by conventional means. In order to reach them, you really need to be doing something that is not focussed on the traditional linear broadcast."

Thomas Bremond, European Managing Director of the Comcast-owned video ad tech firm Freewheel, concisely sums up the challenge: "If you're in the broadcast business or if you're in the operator business, you're effectively getting a bit less money and you're being challenged on your own turf."

Such developments are currently spurring a revolution in attitudes amongst content owners, broadcasters, and operators of all sizes towards OTT.

A recent global survey from research consultancy MTM London found that industry investment in premium OTT video services is expected to grow at an average rate of 70% over the next three years.

According to Stephen Adshead,

VIACOM IS INCREASING ITS INVESTMENT IN SHORT-FORM CONTENT AND USING IT TO SEED SOCIAL MEDIA SITES TO BRING YOUNGER VIEWERS BACK TO LINEAR

Associate Director at MTM, "At the moment, with the growth in penetration of existing services like Netflix, the fact that the infrastructure is pretty much in place across most major developed markets, plus the fact that many operators are looking at the market and worrying that audiences for linear — especially amongst young people — are declining, [they're] thinking now is the time to start looking very closely and very carefully about how to approach this area. I think most major

multichannel broadcasters and major Pay TV platforms are – if not launching services – in the planning phase for those."

Steve Christian, SVP Marketing at security and revenue-protection firm Verimatrix, agrees. "As a Pay TV operator you can't afford to be without a service that reaches these consumer electronics platforms, and your service needs to at least consider what you do about access to your content bouquet in the home."



THE NEW DEPLOYMENT AND OPERATIONS PARADIGM

Launching an online, multiscreen video presence is all very well for major global broadcast content networks like Viacom, or Pay TV operators with major content assets like Sky in the UK or Canal+ in France. It can be assumed they have deep pockets, large audiences and installed subscriber bases, combined with substantial in-house engineering expertise – and therefore the means with which to launch their own range of new OTT services. But what about the smaller players?

Merrick Kingston, Principal Analyst, Media and Connected Home, at IHS, points out that "the opportunity and the challenges, be they technical or business-related, differ based upon whether you're a

A SMALL BROADCAST CHANNEL IS LIKELY TO HAVE MORE OF THE RIGHTS NEEDED FOR A MULTISCREEN OFFERING THAN A SMALL CABLE OPERATOR

channel or an operator. The fundamental difference has to do with – on the one hand who actually owns the content – and on the other who effectively provides access to an audience."

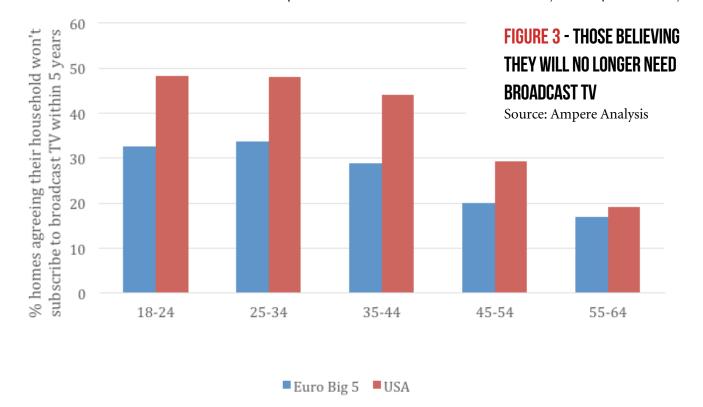
Even a small broadcast channel is likely to have more of the rights it needs in order to establish an online multiscreen offering than a small cable operator – which will often not own any of the channels it delivers and will typically be restricted to quite narrow carriage agreements.

Assuming such rights issues can be resolved, small operators face an additional hurdle when it comes to their installed base of set-top boxes. These may need to be upgraded or replaced to allow subscriber

participation in a multiscreen experience.

Martijn van Horssen, CEO and Co-Founder of TV app development specialists 24i, points out that in order to compete against bigger players' multiscreen offerings, a smaller player will need to make similar investments in, for instance, the creation of a unified UI across STBs and second screens, but be unable to benefit from similar economies of scale.

Another issue, common to both broadcasters and operators, is huge device fragmentation, says Van Horssen. "Every device on the market is different," he points out, yet "you need to be on every device in order to make sure you can provide every







Steve Christian, Verimatrix

>> customer with his needs."

These devices are upgraded or replaced on a much shorter life-cycle than set-top boxes, "which makes it really hard to make sure your app will still work with every update. So the maintenance costs are challenging for them."

Meanwhile, the risks involved in venturing into a new marketplace like OTT are substantial. Michael Lantz, CEO of Accedo, who specialises in helping companies deliver TV applications across multiple platforms and devices, notes that most of them "would like to launch a service, evaluate a year later, and then maybe close it down if it doesn't work so well."

But that is difficult when the up-front investment – for instance in a unified headend able to deliver OTT ABR (adaptive bit rate) streams to multiple devices alongside conventional linear broadcast offerings - is so high. Media companies generally don't have large CapEx budgets, Lantz suggests, yet there are "big costs" involved on the video workflow side, not just with encoders and processing, but with storage, CDN distribution and DRM as well.

Freewheel's Bremond notes that monetisation in an OTT environment is also much more difficult to manage for such new entrants. "In the past, your prime-time eight or nine o'clock show on a large broadcast network was relatively easy to monetise - most of your viewing came from linear," he argues. "Now this is disaggregated: it's coming from multiple audiences. You've got significant viewing that happens after the fact. It brings the challenge of how you value this cross-screen inventory, both from a tracking-the-user

standpoint but also finding the right currency to sell this on. This isn't just GRPs [Gross Ratings Points] anymore. From an operational standpoint, it means that addressing all these different platforms creates a vast amount of different work-flows. Unless you've got the right set of teams and the right set of tools, it becomes increasingly complex.

Fortunately, the OTT sector is beginning to benefit from new deployment and operations paradigms that can considerably lower these entry barriers.

The sophisticated video-processing platforms required to support the delivery of linear MPEG broadcast streams alongside transcoded IP versions are becoming cheaper and more flexible, as they move away from a reliance on dedicated video-processing chips built into proprietary hardware towards software-based encoding running on generic, off-the-shelf machines - a process known as 'virtualisation'.

This in turn facilitates the

"IN THE PAST, PRIME-TIME **BROADCAST WAS RELATIVELY** EASY TO MONETISE. NOW LINEAR AUDIENCES ARE DISAGGREGATED"



Accedo helps companies deliver TV applications across multiple platforms A

MULTISCREEN FOR EVERYONE



where of cloud-based video-processing and storage, both of which can be purchased on an 'as-needs' basis, allowing operations to scale capacity up and down flexibly in order to meet rapidly varying workflow demands.

The 'elasticity' provided through the use of cloud-based facilities empowers a 'pay-as-you-go' paradigm that is ideal for new entrants to the OTT environment. For example, as the number of video streams provided ramps up from launch, cloud-based video resources can simply supplement on-premises encoding without the need for 'chunky' investments in new hardware. The same applies to requirements for extra storage.

Michelle Abraham, Senior Research Analyst at SNL Kagan, says vendors are already coming to mar-



Michelle Abraham, SNL Kagan 🔺

headaches for smaller players, which is the need to negotiate with separate vendors for each different piece of the puzzle.

Taken together, these devel-

(SaaS) model. And – just like a conventional SaaS model – it comes with a maintenance package providing automatic updates for the multiplicity of applications involved in running a complex multiscreen eco-system.

Such models should ideally use a hybrid cloud model, advises Verimatrix's Christian. "I believe that a kind of mix of on-premises and cloud resource is a theme today. I don't think it's necessarily hugely widely deployed out there, but it certainly provides the best overall solution for an operator."

Matt Smith, Chief Evangelist for Anvato, which provides a turnkey end-to-end multiscreen solution for automating live video capture, editing, publishing and syndication, cites two scenarios where a hybrid approach is helpful. In the first case, a broadcaster with limited on-premises equipment covering a live event in the field can push one of its contribution streams onto a cloud-based publishing platform and use it to replicate and create the lower rendition streams required to fulfil the full-spread adaptive bitrate offering that most live events require.

In the second scenario, the

THE ELASTICITY PROVIDED WITH CLOUD-BASED FACILITIES EMPOWERS A 'PAY-AS-YOU-GO' PARADIGM THAT IS IDEAL FOR NEW ENTRANTS TO OTT

ket with OTT publishing products which leverage these developments, "putting together things from the ingest at the beginning, all the way through to helping them monetise and getting it played back [on multiscreen devices at the end]. This means you can have a one-stop-shop to get up and running."

Because these processes are now being run in the cloud, she explains, "there's not much you need to do in the way of CapEx – it is all out of your OpEx." This makes it easier for companies to "just try out" new OTT business models, she says.

Such end-to-end solutions also address one of the recurring

opments make it possible to sell the technical infrastructure required to get an established linear broadcaster or operator up-and-running with a sophisticated online multiscreen offering as a Software-as-a-Service





EVEN LOCAL BROADCASTERS WILL NEED TO MEET THE EXPECTATIONS OF 'DIGITAL FIRST' AS WELL AS 'TRADITIONAL' VIEWERS

broadcaster is asked by its business development team to create a full spread of streaming renditions for 100 episodes of a show like Doctor Who. However, they want the episodes to be ready to go in 24 hours. "Using a hybrid/cloud approach, I can leverage both on-premise hardware and elastic compute capacity in the cloud [for transcoding]," he explains. Intelligent algorithm workflow logic can be harnessed to ensure that "I will use the hardware when I can (when it is most cost-effective to do so) and also use the cloud compute resources to round out my needs in the case that the on-prem hardware won't be enough to meet the time deadline."

ADDRESSING SMALL BROADCASTER AND PLATFORM OPERATOR NEEDS

Even local broadcasters will need to meet the expectations of 'digital first' as well as 'traditional' viewers. Bay TV Liverpool was awarded a local TV licence by UK regulator Ofcom in 2013 to broadcast a linear channel on the UK DTT platform Freeview in the Liverpool area. The station began broadcasting at the end of last year.

The company had existed as a video-based web portal serving the



Stephen Adshead, MTM

local area since November 2011. Indeed, its track record in successfully delivering online video news is seen as a significant factor in it winning the Ofcom licence in 2013, against fierce competition.

CEO Chris Johnson says, "We don't lose sight of the fact that online is important and is going to become more important for TV companies, I just don't quite know what the speed >>>



Martin Gee of Channel 4 at Connected TV Summit 2015



ANVATO — EXPLOITING NEW OTT DELIVERY PARADIGMS

An example of a technology solution that exploits these new delivery paradigms is Anvato's Integrated TV Everywhere offering, which provides a video software platform to broadcasters and service-providers who seek to exploit the booming OTT sector through the delivery of live and on-demand video streams via multiple platforms and leverage the new monetisation opportunities this provides.

Anvato's solution encompasses live and on-demand video management, analytics, syndication and tracking features alongside player development kits for iOS, Android and desktop devices. It can also support broadcasters wanting to replace TV ads with user-targeted dynamic ads.

Anvato's platform is virtualised, running on off-the-shelf hardware and exploiting cloud-based resources as required, and can be made available on a SaaS basis. Anvato's current customer list includes NBCUniversal, Fox Sports, Univision, Scripps Networks Interactive, Gray TV, Hearst Television and Graham Media.

▶ of change is."

Johnson has ambitions to redevelop the channel's Internet portal in a number of ways, and that work has already begun. The catch-up TV facility has recently been revamped,

A 'PAY-AS-YOU-GO' MODEL MEANS BROADCASTERS CAN TRY OUT NEW OTT FEATURES AT LOW RISK, WITHOUT HAVING TO INVEST UPFRONT IN EXPENSIVE HARDWARE

and is now "fairly efficient" (previously, it had been able to handle short 3-5 minute news clips – but uploading half-hour items was clunky and the storage requirements challenging).

"What we want to do now is to grow the website and improve its monetisation," says Johnson. "The real page-turner for me would be a local TV app," he adds.

Other items on his wish-list are: delivering an OTT stream of the live DTT broadcast (this is being considered – and the portal is able to support it); a system for automatically generating short clips from the live feed and populating social media groups with them (there is already a presence on YouTube, Facebook and Twitter, but currently clips are chosen and loaded manually); and monetisation of online syndication (ad revenues from YouTube are to be enabled shortly).

Other small broadcasters around the world face similar challenges, keen to exploit opportunities for online and social syndication but nervous about the up-front investment involved given their limited resources.

This is one of the markets Anvato is targeting with its turnkey TV Everywhere solution, Anvato Watch, according to Matt Smith. This platform is available on a 'pay-as-you-go' model, which means broadcasters can use it to try out new OTT features at low risk, without having to invest up-front in expensive hardware, and can be up-and-running in

a matter of weeks.

Anvato Watch can generate a live IP stream from the existing broadcast signal for online syndication purposes (e.g. on Netflix, Hulu or YouTube), and create short clips to populate broadcasters' social media properties, such as their Facebook Page or Twitter feed.

It can also replace the local linear TV ads on the broadcast feed with personalised ones appropriate to the user's location on the OTT stream, and provide an SDK and video player to support the creation of a TV app for playback of content on desktop and mobile devices.

One advantage for smaller players is that the system can deliver >>>



Chris Johnson, Bay TV



to all 'second screens' regardless of OS, using HTTP Live Streaming (HLS). This can substantially reduce CDN delivery and storage costs.

Smaller cable operators face many of the same challenges as broadcasters, but they also face additional hurdles. Thus they have an installed base of set-top boxes to upgrade or replace if they want to make them OTT-capable, and then maintain. Also, addressing multiple screens will usually require them to observe strict content protection rules imposed by the third-party channels they carry.

They may also exist in a complex advertising environment—where some of the channel breaks carry national advertising, some of them (such as a regional channel) carry regional ads, and some allow local ads to be overlaid.² This may become an even more complex environment if dynamic ad insertion (DAI) is added to the OTT multiscreen mix.

Finally, as service providers, and unlike broadcasters, smaller cable operators are the first port of call for customer complaints if their OTT multiscreen experience is found wanting.

Verimatrix's Christian emphasises that "the requirements you have for protecting the linear stream for video distribution apply just as



Matt Smith, Anvato

knows unambiguously that what they get on the big screen is similar to what they get on the consumer electronics tablets and phones." This, argues Christian, makes the OTT multiscreen environment "very comsoftware upgrades for multiscreen devices implied by such an approach, and also address the need to protect OTT multiscreen delivery through the application of 128-bit AES encryption to all the content and manifests it processes. Thanks to an open architecture and the use of APIs, the company can integrate with a recognized DRM solution such as Flash Access, PlayReady, Widevine or Verimatrix whenever needed.

This inherently open approach is arguably a must-have for any end-to-end solution targeted at smaller operators, since it allows easy linkage with other services, such as an ad-decision platform like Freewheel's – allowing them to out-source the complications of dealing in a compliant fashion with the widely varying sets

SERVICE PROVIDERS ARE THE FIRST PORT OF CALL FOR CUSTOMER COMPLAINTS IF THEIR OTT MULTISCREEN EXPERIENCE IS FOUND WANTING

much to protecting the linear stream and catch-up services on the CE platforms. We would argue that the best consumer experience is integrated rights management across those different formats so that the consumer

fortable and very intuitive for a consumer. If you break that kind of rule then consumers get confused about what the service really offers."

Smith says Anvato Watch will manage the multiplicity of ongoing



AS WEBSITE AUDIENCES BEGAN TO CONSUME MORE LONG-FORM LIVE CONTENT, HEARST TELEVISION WAS KEEN TO INSERT MID-ROLL AS WELL AS PRE-ROLL ADS

of rights that may exist when seeking to monetise third-party channels in a multiscreen environment.

Smith highlights the need to minimise call-centre loads for the operator market. He says an open architecture means you can integrate an end-to-end monitoring system able to collect data from different points in the system, including the individual players streaming OTT content on second screens. Access to this type of data can help minimise call-centre time and, with it, any necessary extra call-centre investment required for the multiscreen migration.

Hearst Television provides a good example of a regional

broadcaster that first adapted to changing consumer behaviours and then had to focus more on how to monetise the new online and multiscreen viewing paradigms. The broadcaster has 25 news-producing stations across different US markets and by 2013 it needed a technology solution to address the fact that an increasing number of viewers were watching its live news on their connected devices.

Historically, video-clips on its website ran with just a single pre-roll ad because of their short length. But as audiences began to consume more long-form live content, Hearst was keen to insert mid-roll ads as well in order to exploit this development.

Mike Rosellini, VP of Digital Operations at Hearst Television, has explained: "Our goal was to find a way to dynamically replace ads within news broadcasts, service more ad spots – including local or national – thus better monetise the product on mobile, desktop and any connected platform."

Rosellini also wanted to broadcast and schedule multiple live streams in HD; integrate any new system with Hearst's existing broadcast automation set-up; and target ads to each user. He was naturally keen to minimise the capital outlay involved in addressing these various requirements.

Hearst introduced the Anvato Media Content Platform (MCP), which, like Anvato Watch, is designed as an easy-to-use, integrated, cloud-managed solution riding on top of existing broadcasting assets, which can also be delivered using a Software-as-a-Service (SaaS) model. Rosellini says the broadcaster was drawn to the way solutions are



Trevor Green of Bay TV (left) interviews the Mayor of Liverpool, Joe Anderson. Director of Programmes Chris Kerr is standing





Michael Lantz, Accedo

CANAL+ HAS ENSURED THE TIME TAKEN TO SWITCH FROM A DVB BROADCAST TO THE FIRST FRAME OF THE [IP] 'RE-START' VERSION IS 2-3 SECONDS

managed via a single, web-based interface that runs in the cloud.

MCP addresses the needs of players like Hearst who have larger, more complex systems to migrate. It encompasses insertion of unique, user-targeted ads, support for broadcast-style advertising pods that include a mix of national and local spots, and playback of adaptive bitrate streams up to and including HD quality on all devices.

One of the modules within the MCP package is a video-clipping and syndication module that can create video clips on-the-fly, allowing them to be distributed to broadcasters' web portals and syndicated on social media.

THE GROWING IMPORTANCE OF LIVE-TO-VOD

One of the reasons consumers, particular younger ones, consume so much content online is because they can't find the content they want on broadcast schedules at the time they want to watch it.

This impatience is now manifesting itself with respect to the OTT environment itself. Indeed, viewers were already complaining to the BBC two years ago about the speed with which episodes of series they had missed were becoming available on catch-up TV.

Marina Kalkanis, the Head of Core Services at the BBC, wrote in her blog that "Because BBC iPlayer has been a huge success, loads of people rely on BBC iPlayer to catch-up on their favourite programmes. We get complaints when programmes take too long to become available."

Live programmes were particularly challenging for the Corporation, she wrote, because it had to carry out all the online processing after the broadcast had completed. "This is even more challenging when many live programmes all broadcast at the same time," she observed.

Kalkanis went on to explain how the BBC had addressed viewers' needs by using a new 'elastic' cloud processing facility to overcome the 'spike' and deliver catch-up versions much closer to broadcast time - but this particular 'live-to-VOD' issue is already passé. Today, the viewer who has just missed the beginning of a scheduled linear TV programme is no longer prepared to wait for the 'catch-up' version to become available in a few hours, but wants to view it from the beginning, right now. Thus the BBC is about to extend its 'Live Restart' facility beyond desktop computers to connected TVs.

US satellite giant DirecTV now offers a 're-start' feature on its Internet-connected set-top boxes, as does Canal+'s new hybrid pay-DTT box in France, both aiming to address the needs of increasingly impatient viewers.

In a similar scenario, the viewer realizes they've forgotten to set their PVR to record, but also wants to view the programme right away. Fortunately, the operator has recorded (or is recording) a copy of it in the cloud, and the viewer is able to access it and stream it within seconds. This is known as 'network PVR' (nPVR), with companies like Swiss



NEWS PROGRAMMING LENDS ITSELF PARTICULARLY WELL TO INDIVIDUAL ITEMS WITHIN A NEWS BULLETIN BEING SPLIT UP INTO SHORT SEGMENTS, SEEDED INTO SOCIAL MEDIA

▶ telco Swisscom offering it as yet another on-demand feature.

However, it is not always straightforward to implement such innovative 'live-to-VOD' features. Verimatrix's Steve Christian notes that regulators have until recently frowned on nPVR, because the most economical way to deliver such functionality is for the operator to simply create one single central copy of every programme (or at least the most popular ones) in the cloud. "The assertion was for a long time that viewers needed [their own] private copy for everything they had recorded. Now I believe it is being interpreted a bit more liberally," he suggests.

This model is highly efficient in that the same IP asset a service provider generates off the back of the traditional MPEG broadcast with an ABR encoder can be used to create a stored asset in the cloud for later retrieval.

The speed with which this can be accomplished is becoming a critical factor in live-to-VOD deployment models. One of the major technical challenges Canal+ faced in delivering its start-over feature was to reduce the time it took to switch from the 'interrupted' DVB broadcast to the first frame of the 're-started' IP version from 18-20 seconds down to two or three seconds.

But why did Canal+ feel compelled to do this? This year, a series of reports from video optimisation company Conviva offered some insight: viewers were becoming increasingly impatient with slow start-times and re-buffering and will leave to look for alternative content (often



Merrick Kingston, IHS

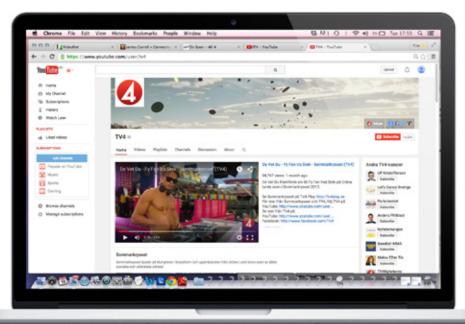
from alternative providers) within just a few minutes if the experience persists or is repeated.

In its latest report in July, Conviva investigated binge-viewing habits and found that "unavailable episodes – defined as either impossible to find or delivered within a subpar playback experience – prompted nearly half of all OTT binge-watchers to give up on a series, with half of them neutral-to-unlikely to ever return."

While meeting consumers' increasingly high QoE standards is challenging in an OTT environment, a 'live-to-VOD' strategy can usefully address 'digital-first' consumers' thirst for short-form content.

Chris Johnson at Bay TV Liverpool acknowledges that short clips "is what young people want," and bemoans the fact that his web portal, currently being upgraded, relies for the time being on these having

to be loaded manually onto his servers. Thus he sees value in a system that could spool clips off his >>>



TV 4 has a 'digital-first' strategy that includes more short-form A

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broadcast channel on-the-fly.

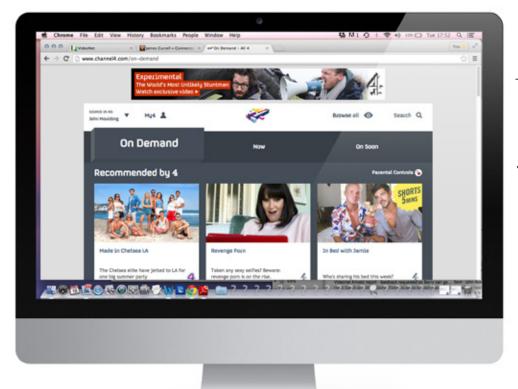
News programming lends itself particularly well to individual items in a news bulletin being split up into short segments, he points out, and the benefit for Bay TV is that he can seed these on Bay TV's YouTube, Facebook and Twitter pages and "send people back to our own stuff."

The ultimate service for impatient viewers would of course be one where they could watch their favourite programme before it is broadcast. 24i's van Horssen reveals that his company has created "catch-forward" services for some of its broadcaster clients through which viewers can

watch tomorrow's or next week's episode ahead of time. "If you have a really compelling cliff-hanger, you can redirect the customer to your VOD portal and let them buy next week's episode for £1," he suggests.

As one senior executive with responsibility for advertising and data at a Tier 1 cable company explains, what the industry means by 'live-to-VOD' is already changing: "It's not a matter of adapting VOD to a live broadcast schedule, it's the other way around – the people who own the source content may in fact put that content out on VOD first."

ITV HAS A NUMBER OF SEPARATE YOUTUBE 'CHANNELS' DESIGNED TO LINK THE VIEWER BACK TO ITS OTT CATCH-UP PLATFORM, ITV PLAYER



THE OPPORTUNITY FOR SYNDICATION AND HOW TO ENABLE IT

That there is an increasing trend for owners of long-form video content to monetise OTT using syndication is indisputable: one only has to look as far as Google's latest set of financial results.

In its July earnings call, Google's Senior Vice President and Chief Business Officer, Omid Kordestani, pointed out that mobile users arriving on its YouTube platform "who start at the YouTube homepage similar to the way they might turn on their TV" now spend more than 40 minutes per session, up more than 50% year-on-year.

One reason is simply that more long-form content is being syndicated on YouTube. That in turn is because what formerly constituted a risk to broadcasters and operators – that pirated versions of their premium content might turn up on the Google-owned platform – has now been defused by Google's Content ID initiative, which allows them to 'claim' their copyright material and monetize it.

Kordestani says that Content >>















Channel 4's All 4 online service harnesses registration data to personalise the UEX



SYNDICATION WHERE VIEWING OCCURS OUTSIDE A PUBLISHER'S OWN AND OPERATED PROPERTIES ACCOUNTED FOR 11.5% OF PROGRAMMER VIDEO AD VIEWS IN Q1

▶ ID is now used by more than 8,000 partners, who have between them already 'claimed' over 400 million videos.

An added attraction is the 'digital-first' nature of YouTube's audience, which reaches more 18-to-49 year olds in the USA than any US cable network, according to Kordestani. He went on to point out that the number of channels earning six figures per year on YouTube is up 50% year-over-year.

How easy is it for smaller players to exploit online syndication in this way?

Ampere's Bisson points out that "one of the main hindrances for a smaller broadcaster is the rights situation around what they can do with their content – because they're probably less likely to have own-produced or own-commissioned content. [This] very much limits what you can do in the online space."

But assuming that barrier is not there, "then there are obviously ways to get your content onto online platforms and reselling it to people who do have a channel or an OTT platform," he says. Syndication is the most obvious one: "If you look at [commercial UK broadcaster] ITV, outside of what they are doing in the UK, much of what they are doing is selling content into other platforms and monetising the advertising around that."

Thus ITV has a number of separate YouTube 'channels', which feature short clips promoting new shows as well as items of longer-form



Guy Bisson, Ampere Analysis

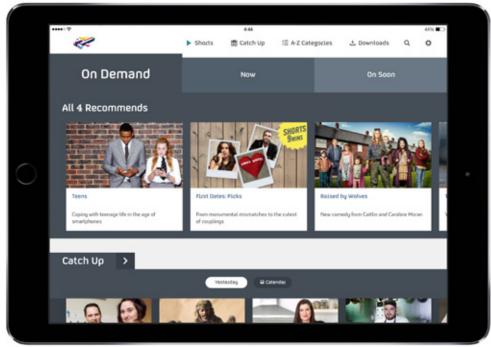
content. These are designed to link the viewer back to its OTT catch-up platform, ITV Player.

One of the advantages for smaller players, comments Bisson, is that such a set-up is "a completely different environment to the traditional channel set-up costs where obviously the upfront costs are immense."

For instance, YouTube offers a low-entry-cost video ad monetisation format called TrueView, with ads that can be bought programmatically through Google's DoubleClick Bid Manager. This is not that much more difficult to administer than Google AdWords.

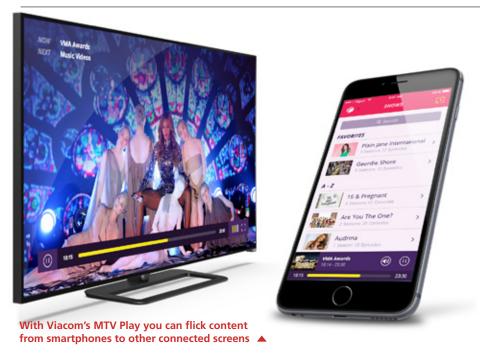
According to the Tier 1 cable executive, "for a smaller broadcaster to set up streaming on its own website is not difficult to do now, and syndicating that content onto You-Tube is also not difficult to do now. Four years ago, five years ago, it was harder. But now, it's dead easy."

Freewheel's video monetisation report for Q1 2015 shows that this kind of syndication, where viewing occurs outside of a publisher's own and operated properties,



All 4 from Channel 4

ANVATO



MTV DIGITAL TEAMS CREATE HUNDREDS OF SHORT-FORM STORIES EVERY 24 HOURS TO CAPTURE GLOBAL POP CULTURE CONVERSATIONS

▶ accounted for 11.5% of programmer video ad views in Q1, compared to 8% a year ago. Operators' apps are now seen as the optimal way to deliver such views, having increased by 147% year-on-year.

'Social syndication' is a similar process, but one where short clips are delivered to social media sites, either the channel or operator's own pages, or by using targeted 'tags' to get picked up by users' news-feeds.

Research from Facebook at the beginning of this year showed that since June 2014, the social web site has averaged more than a billion video views per day. "On average, more than 50% of people who come back to Facebook every day in the US watch at least one video daily and 76% of people in the US who use Facebook say they tend to discover the videos they watch on Facebook," it reported in a January blog.

More recently, in July, Facebook acted to make the process even easier for content-owners by allowing those that own Facebook Pages (i.e. public profiles created to



Alper Turgut, Anvato

promote themselves) to customise the distribution options for their videos on Facebook, and offered them a new Video Library facility to centralise and simplify video management.

Twitter – which boasts 316m monthly users and 500m tweets sent per day – has also recently taken steps to enhance its attractions as a video syndication platform. In June, it announced that native videos, Vines and animated GIFs would now begin to play back automatically as soon as the tweet containing them was opened. Earlier, it had also announced it would make its ad inventory available through Google's DoubleClick Bid Manager platform, thereby reducing the entry-cost for smaller players.

As mentioned earlier, Viacom is one company that is exploiting the attractions of social media syndication by increasing its investment in short-form content. At the Connected TV World Summit, Viacom's Currell explained that the company's MTV music channels now follow an 'always on' strategy by which MTV digital teams create hundreds of short-form stories every 24 hours to capture global pop culture conversations.

Each story is published in multiple forms, such as news posts, micro-blogs, short-form animations, gifs, etc. and seeded through third-party social media platforms such as MTV's international YouTube channel, or its content feed on Snapchat Discover. These assets link back to MTV's own apps and websites.

The benefits are clear, claimed Currell. "Our short-form content strategy is driving massive levels of engagement via third-party social media platforms as well as our own digital properties. It's helping us derive huge marketing value on these platforms as well as growing

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▶ advertising, subscription, and transactional revenue from digital."

Speaking at the same event, Carola Lundell, Head of Business Development at TV4 Group, said that short-form viewing of TV4 Group content had increased dramatically over the last year. She admitted that one of the objectives of its 'digitalfirst' initiative was to tempt shortform viewers into watching longdistributes stories from its international news channels via Twitter, embedding a short clip in the tweet, which itself contains a link to the full item back on its website.

Anvato's CEO Alper Turgut notes that one of the advantages of working with his company is that "if you're utilizing our infrastructure, your editors can cut clips and send them to social media in real-time.

optimised onward delivery.

Once the master OTT 'copy' has been created and stored, creating a 'clip' simply becomes a matter of designating the address of the first 'chunk' and its succeeding ones in a manifest file. It is not the 'clip' itself that is sent out – it is the manifest file.

"OUR SHORT-FORM CONTENT STRATEGY IS DRIVING MASSIVE LEVELS OF ENGAGEMENT VIA SOCIAL MEDIA PLATFORMS AND OUR OWN DIGITAL PROPERTIES"

form content as well.

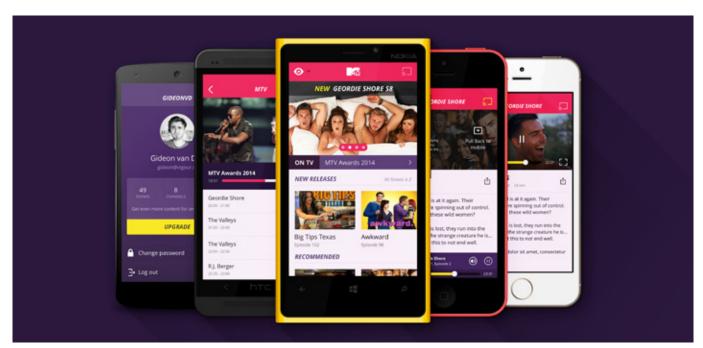
"Yes, absolutely," she replied to an audience question. "And we can see it working, although not as much as we would like. It is a key goal to transform the short-form views to longer durations."

A more simplified and accessible approach for smaller players is exemplified by CNN, which routinely You can syndicate to multiple destinations, destinations that will drive traffic back, like Twitter and Facebook."

The infrastructure required to do this is not complex. Programmes are no longer stored as big unitary files, but built up in chunks that can then be stored and cached at different places across the network for

USING ADVERTISING TO MONETISE OTT AND MULTISCREEN

An executive responsible for systems and development at another Tier 1 operator, which has developed one of the most sophisticated over-the-top ecosystems in the Pay TV world, counsels that any new entrant seeking to monetise a new OTT multi-screen environment should first set up a registration scheme in order to find out more about its customers and analyse their video consumption.



MTV offers MTV Play and MTV Trax OTT apps to target millennials



Inevitably, that will spawn a database that will require a new management system but without it, he argues, there can be no effective ad targeting system or recommendation engine.

In fact, UK broadcaster Channel 4 adopted exactly this strategy before launching its unified online platform All 4.

"We worked hard to build a very, very large data set of registration data," said Martin Gee, All 4's Programme Manager. "Personalisation is absolutely crucial: ultimately, if we're talking about the content we're recommending to viewers, there's nothing more irritating than getting recommended something that's irrelevant to you."

Once registration and a signin mechanism is in place, and assuming there already exists either an in-house sales arm or an association with someone else's, personalised advertising on an OTT asset becomes possible.

The industry consensus is that putting a pre-roll ad on the front of a piece of catch-up content is relatively straightforward, technically speaking, whereas splicing an ad into the middle of a piece of long-form content (the equivalent of a mid-programme broadcast commercial break), presents something of a leap in technical complexity.

Nevertheless, this may be desirable, since, as the same Tier 1 operator mentioned above maintains, "People are seeing it as effectively broadcast. We certainly see it as broadcasting, and we put the rigours of broadcasting around it. We would expect the experience of a viewer to be virtually identical on a mobile to what they get on a set-top box."

One way to achieve this is to use server-side ad insertion. Allowing the local video player in the mobile



▲ Jamie Currell of Viacom speaks at Connected TV Summit

ANY NEW ENTRANT SEEKING TO MONETISE A NEW OTT MULTISCREEN ENVIRONMENT SHOULD FIRST SET UP A USER REGISTRATION SCHEME

device to handle this is the norm, but Anvato's Turgut argues that such players are often quite primitive, and frequently subject the viewer to rebuffering. Server-side ad insertion side-steps this issue by inserting the relevant ad in the cloud, with the result that the local player only has to process a single, continuous stream.

"Server-side ad insertion allows you to have a TV-like experience, a smooth ad, frame accurate on all of these devices," says Turgut. "People truly feel they've got the content experience that they desire. There's no buffering. There are no spinning wheels."

For the content company monetising the ad, there are other advantages besides offering a TV-like experience. All the devices can be addressed from a central dashboard, and with the ad insertion effectively taking place in the cloud, no changes have to be made at device level to allow the targeted ads to be served. The technical complexities of mid-roll insertion are also relegated to the cloud. Meanwhile, server-side ad insertion side-steps device-based ad-blocking software, increasing potential yields.

However, IHS's Merrick cautions that, when it comes to targeted advertising, size matters. "If you're a Tier 2/3 broadcaster and you choose to construct your own online portal, your own set of mobile apps...I don't think the issue of ad insertion is a technical challenge, as such, because you're running on your own platform. I think the main impediment there would probably be scale. For



>> the smaller channels, it's technically possible to target an advertising spot that is exposed through your mobile app, but whether that is ultimately of interest to advertisers is another question: targeting in itself is great, but being able to reach a small subset of what might amount to a couple of thousand households may ultimately not be particularly interesting to an advertiser."

The implication is that syndication on sites such as YouTube, Facebook and Twitter may initially be easier to monetise for new entrants than their own owned-and-operated OTT properties, since the programmatic selling and buying models they make available rely on aggregated inventory which may offer the scale required for targeting to work.



CONCLUSION

In summary, one can argue that the barriers to OTT and multiscreen for new entrants are falling, due to a combination of technology factors - virtualisation, the availability of cloud processing and storage models, and the advent of programmatic advertising selling and buying, all of which tend to lower entry-costs. These developments go hand-inhand with the creation of new endto-end solutions offered on a SaaS basis, which also lower the investment risk.

The fly in the ointment is rights ownership, an issue that should properly be resolved before any new entrant puts its toe in the water. But even here, there is general agreement that rights-owners are now much more conscious of the business opportunities presented by a more flexible approach. In short, there has never been a better time for a smaller or mid-sized broadcaster or platform operator to become an OTT, multiscreen player.

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