*Insight on the global video delivery business*

# Digital TV Europe

August/September 2019

The DTVE interview: Eamonn O'Hare | Cloud video | Ovum on Disney and Amazon | IBC preview

# Big head

## Artificial intelligence and the user experience

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# This issue





## Editor's note

# Time for a change

Welcome to the new-look *Digital TV Europe*. In addition to a new design, the magazine features a range of new formats including expanded coverage of recent top news stories, dedicated one-to-one interviews with key industry figures, a dedicated data and analysis section from our research partner Ovum, and a new section devoted to forthcoming industry events.

In this issue, we talk to Eamonn O'Hare, CEO of industry investment outfit Zegona Communications, about the Spanish market and the prospects for the European service provider space in general. We look at the growing impact of artificial intelligence on the business of content discovery and the user experience. We reflect on Disney's streaming strategy and provide data and analysis on both the prospects for Disney+ and Amazon's bundling of video with shipping. We look at content service providers' challenging migration path to cloud-based delivery. We talk to Digital UK CEO Jonathan Thompson about his day-to-day work and the future of Freeview, and we look at the developing trend of advertising-supported VOD.

If all that isn't enough, we also provide in-depth coverage of all the recent industry news, technology developments and key personnel changes. And this being September, we select some highlights from this year's IBC Show.

Stuart Thomson, editor

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# News digest

News and analysis of the international digital TV business.

## RTL unveils structure for 'total video' era as VOD base grows


**RTL CEO Thomas Rabe has claimed that his company is "shaping the future of the European 'total video' industry" as the broadcaster unveiled a new management structure including key new appointments and passed responsibility for its advanced advertising units to RTL Deutschland, all amid strong Q2 growth for its on-demand services.**

The company has named Elmar Heggen, formerly chief financial officer, as chief operating officer, responsible for coordinating and further optimising the operations across the group's international footprint.

RTL also has named Björn Bauer, previously EVP of corporate controlling and strategy at the media group's majority shareholder Bertelsmann, as its new chief financial officer, replacing Heggen.

The media outfit has also created a new group management committee composed of the RTL executive leadership and CEOs of its three largest business units, to drive the group's strategic agenda. The new committee will be made up of Rabe, Heggen and Bauer working alongside RTL Deutschland CEO Bernd Reichart, M6 Group CEO Nicolas de Tavernost and Fremantle CEO Jennifer Mullin.

Each of the operating division chiefs will be given specific group-wide responsibilities in different areas.

"The GMC will shape the future of our company, bringing together massive experience and different perspectives. Mediengruppe RTL Deutschland will lead our newly created European advertising technology development unit, while Groupe M6 will build the technology backbone of RTL's streaming services. And our global content business Fremantle is at the very heart of what drives our businesses – creativity and content," said Rabe.

RTL Deutschland will be given immediate responsibility for the group's advanced advertising activities across all territories with the exception of the UK.

The ad tech units will be grouped under the Smartclip brand, although the UK will continue to act as the hub for SpotX Global's operations in Europe.

The company said it had begun reviewing strategic partnerships for the SpotX Global business following its acquisition of server-side ad insertion specialist Yospace earlier this year.

RTL said that the SpotX business will continue to operate on a global basis, serving some of the world's largest media owners, device manufacturers, platform operators and publishers.

The broadcaster said that for Smartclip, the objective is to create an open ad-tech development unit, based on the technology developed by Smartclip and custom-tailored for the needs of European broadcasters and streaming services.

Rabe said that the review of the ad business would facilitate partnerships in Europe and the US and bundle efforts and resources to build a competitive European advertising technology platform.

The new management structure and changes in the ad tech business come as RTL posted solid Q2 numbers featuring strong growth in its on-demand units.

Paying subscribers for its VOD platforms in Germany and the Netherlands were up 46.2% to 1.2 million.

RTL posted revenues of €3.2 billion for the first half, up 4.6% on a like-for-like basis. EBITA was flat at €538 million, weighed on by the group's investments in programming and its video-on-demand services.

# Salto, the 'French Netflix', gets green light with conditions

Salto, the French video-on-demand JV between the country's main terrestrial broadcasters, has secured a green light from the country's competition watchdog but with major conditions attached.

Salto, which is now scheduled to launch in the first quarter of next year, will include the linear DTT channels and catch-up services along with a SVOD service. The Autorité de la Concurrence said that the project can go ahead but the JV partners must commit to a series of remedies to prevent anticompetitive coordination in the rights acquisition market, the commercialisation of TV channels, the distribution of pay TV services and the advertising market.

The regulator's approval was welcomed by the three broadcasters behind the project.


"Now that Salto has been approved, we will at last be able to put together Team France in broadcasting, which I have been longing for. The launch of the platform will very soon give us what we need to compete against international players on our own territory. And it will be a new way for the French and European creative industries to engage with their public," said France Télévisions director-general Delphine Ernotte.

Gilles Pélisson, CEO of the TF1 group said: "I am pleased that this project is becoming a reality, embodying as it does a new ambition for the French broadcasting industry. The Antitrust Authority's ruling is a very positive sign, as it demonstrates that the authorities awareness for the need to support and accompany industry players in making the necessary innovative changes in order to face new challenges."

Nicolas de Tavernost, chairman of the executive board of M6 Group said: "This ruling finally gives us the opportunity to work together to develop an offer and a platform that are in phase with changing usage. Our channels are popular with French people, our content is attractive and our technology is very advanced: all reasons to welcome the forthcoming launch of an ambitious joint offer like Salto.

The watchdog expressed concern that France Télévisions, TF1 and M6 could insert clauses in their contracts for the acquisition of linear rights that would make it more complex for competitors to Salto to acquire non-linear rights.

The regulator has thus stipulated restrictions on the ability of the Salto partners to link the purchase of linear and non-linear rights, or for Salto to benefit from contractual clauses in agreements struck by its parent companies.

Salto will not be able to strike exclusive carriage deals for DTT channels in the clear, and the three parent broadcasters will have to make their DTT channels and associated services available, independently of Salto, to all third-party distributors on fair and non-discriminatory terms, with two independent experts commissioned to regulate the price paid by Salto to the broadcasters. Strict limits will also be placed on the broadcasters to cross-promote Salto on their terrestrial channels.

The Autorité judged that there was little risk of an adverse impact on the distribution of pay TV services given the strength of competitive platforms and the lack of a strong profile of any of the main terrestrial channels in this market, dismissing fears expressed that Salto would create a "cartel" of the three main broadcasters facing distributors.

## In brief...

**Apple eyes November launch for Apple TV+ at US$9.99**

Apple is reportedly planning to roll out its premium streaming service for US$9.99 per month starting in November. According to Bloomberg, the company wants Apple TV+ to be a part of its drive to reach US$50 billion (€45 billion) in service sales by 2020 with a launch globally in over 150 countries. A price point of US$9.99 per month sets Apple TV+ on a par with its Music and News+ services. A report from The Financial Times also said that the company has allocated more than US$6 billion for original shows and movies in an attempt to compete with Disney, Netflix and HBO.

**Canal+ 'finalising' distribution deal with Netflix**

Canal+ is in advanced talks about a deal to distribute Netflix on its platform, according to a report by French newspaper *Le Figaro*. According to the paper, the negotiations between the pair are well advanced and could lead to an agreement being finalised over the next few weeks. Netflix would be available as an option to Canal+ subscribers, but the pay TV operator has not ruled out bundling the service with its own offerings, says *Le Figaro*. Netflix is by far the leading SVOD platform in France with around five million subscribers.

**SFR to be first French operator to integrate Amazon Prime Video**

Altice Europe has signed up to a partnership deal with Amazon Prime Video to make the Amazon service available to its SFR customers in France. The agreement means that SFR will be the first Altice operator in Europe and the first operator in France to include the Prime Video app within its TV box. Amazon Prime Video will be available via the LaBox SFR Fibre, SFR Box Plus and the new SFR Box 8 set-top boxes. The launch of Amazon Prime Video means that SFR customers who subscribes will be able to watch Amazon Originals *The Marvelous Mrs. Maisel*, *Good Omens*, *Tom Clancy's Jack Ryan*, *The Grand Tour*, *The Boys*, *The Man in the High Castle*, *American Gods* and forthcoming *Carnival Row*. SFR customers will also have access to local Amazon Prime video originals including *Jérôme Commandeur: Tout en douceur* and *Raphael Varane: Destin de Champion*, alongside popular French and Hollywood movies.

# Liberty rejects changes as Sunrise goes to war with Freenet

**Liberty Global has rejected making any changes to its agreement with Swiss service provider Sunrise for the sale of its Swiss unit following the eruption of hostilities between Sunrise and its biggest shareholder, Germany's Freenet over the terms of the deal.**

Noting the "recent statements" on the transaction, Liberty said that it was "fully committed to completing the transaction as agreed".

It said that it had not had any discussions over amending the terms of the deal "and has no intention or interest in doing so".

In its statement, Liberty said it was "pleased with the continued turnaround by UPC Switzerland".

The battle between Sunrise and its largest shareholder Freenet over the former's plans to acquire UPC Switzerland has escalated, with Sunrise accusing Freenet board representatives of "a conflict of interest" and resolving to exclude them from discussions about the merger. Sunrise also asserted that Freenet had previously proposed an illegal acquisition of Freenet shares at the expense of minority investors.

Responding to Freenet's announcement that it intended to vote against the acquisition by Sunrise of Liberty Global's Swiss unit, Sunrise said that the concerns raised by the service provider were "neither justified nor in the best interest of Sunrise and all its shareholders" and accused Freenet of being "guided by its own short-term financial constraints and self-serving objectives".

Sunrise accused Freenet of "seeking to partly shift its heavy indebtedness onto Sunrise" by pushing for greater leverage for Sunrise to finance the acquisition.

Sunrise also upped the ante in its battle with the German operator by accusing it of requesting an "inappropriate and illegal" purchase of Freenet shares at a premium by either Sunrise or Liberty Global in exchange for it giving a green light to the deal during Sunrise's final negotiations with Liberty Global. Such a deal would have been at the expense of other shareholders, the Swiss operator said.

Sunrise said it had offered to make changes in the capital structure of the acquisition to accommodate Freenet's desire to reduce the size of the rights issue.

The Swiss operator said it had stated its openness to consider an increase in leverage to finance the acquisition, reducing the size of the proposed share rights issue by CHF1 billion (€920 million), but that this had been rejected by Freenet.

Sunrise also rejected Freenet's push for Liberty Global to retain debt rather than transfer it to Sunrise as part of the deal as "opportunistic and inappropriate" in view of an increased expectation of synergies from the merger of the pair and the standalone value of UPC Switzerland.


Sunrise said it was assessing whether Freenet's representatives on the Sunrise board had "breached their fiduciary duties, including their duty of confidentiality" and that it had resolved to exclude them from deliberations on the acquisition as a result of their "conflict of interest".

Sunrise said that the "decision has not been made lightly but is unavoidable given Freenet's conduct".

Freenet, which holds a 24.5% stake in Sunrise, said that it would vote against Sunrise's CHF4.1 billion (€3.77 billion) capital increase to finance the CHF6.3 billion (€5.79 billion) acqusition.

## In brief...

**Polish football league launches international streaming service**

The Polish Ekstraklasa football league has launched its own OTT TV streaming service, Ekstraklasa.tv. The league expects the service to deliver additional revenue and to serve as a way to reach fans of Polish football around the world. The service will include live coverage of matches with Polish-language match commentary in territories where rights are not licensed on an exclusive basis.

**AMC adds SVOD services to YouTube TV**

AMC has signed a deal with YouTube to bring two of its proprietary subscription services to YouTube TV. Acorn TV is dedicated to British dramas, while the Urban Movie Channel (UMC) features a selection of black TV shows and films. The former is available at a US$6 per month subscription, while UMC costs US$5 per month. Shows on Acorn TV include *Manhunt*, *Line of Duty* and *Agatha Raisin*.

**Sky Deutschland offers PPV Bundesliga 2 matches via Onefootball app**

Sky Deutschland has struck a deal with football fansite and app Onefootball to make Bundesliga 2 and DFB Cup football matches available on a pay-per-view basis via the site. Football fans will be able to watch live broadcasters of fourth round matches of the German second division football tournament from €3.99 per match via the Onefootball app. PPV matches will be billed via the Apple iTunes or Google Play stores. Football fans will also be able to watch English Premier League highlights via the Onefootball app in a move designed to drive interest in Sky's subscription service. This is the first time that Sky has made broadcasts of individual matches available via pay-per-view. Sky Deustschland is also to launch a new movie channel of its own, Sky Cinema Special HD, that will be home to pop-up programming from October 1.

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# Q&A: Ivan Verbesselt, NAGRA

Ivan Verbesselt, SVP of marketing at NAGRA talks about the importance of Scalable Service Protection for pay TV operators

***NAGRA has a strong focus on Scalable Service Protection at IBC this year. Why is this so important for pay TV service providers?***

In a world where the demand for high-quality content – delivered anytime, anywhere, and on any device – is higher than ever, service providers increasingly have their work cut out for them when it comes to keeping content secure.

Vastly increased numbers of devices along with an elevated use of virtualisation and the cloud, could equate to many more security threats – not to mention a broader, multifaceted attack surface.

In this context, a more comprehensive approach that encompasses a pay TV operator's entire service is essential to the next generation of content security. And everyone from Hollywood studios to live sports broadcasters and pay TV service providers must now leverage a wider sphere of security technologies to distribute content securely over IP networks.

***Is this easier said than done?***

It's certainly not simple by any means; operators will have to simplify operations and reduce overheads, while still meeting all relevant Hollywood and sports rights holder requirements for content protection.

They must also look to rationalise architectures by selecting a scalable, modular, cloud-based solution to unify all aspects of their content protection needs – regardless of which network or device they're delivering content to.

And of course, it's critical to work with a partner who can deliver a solution specifically designed for converged networks – but one that's also easy to deploy and addresses the need for scale and global reach.

But first and foremost, it's important to accurately and holistically assess those needs. At NAGRA we've developed a framework akin to a radar to actively guide them through the assessment. We evaluate a customer's service security against four categories of concern (monetisation, convergence, service, analytics and business intelligence) and determine and prioritise with them the steps required to adequately address the threats.

***What cloud-based and scalable security solutions are available to them?***

As mentioned above, a holistic approach to content protection, one that goes beyond traditional CAS and DRM technologies, is key.

This is where NAGRA's Scalable Service Protection solutions come in to help service providers and content owners arm themselves to overcome the many threats levied against their services today – whether it's direct threats to content, or broader threats at the service level from the increasing adoption of IoT devices.

These cloud-based solutions can scale across operations of different sizes. They can also provide online trial options and leverage adaptive security for optimal performance across a vast client device ecosystem.

Our flagship product in this regard is NAGRA cloud.SSP, an advanced and modular software-as-a-service (SaaS) security services platform that comprehensively addresses all dimensions of content and service protection for the connected world. We'll be showcasing NAGRA cloud.SSP and other cloud-based solutions at IBC.

***Are there any recent examples of these solutions in action?***

Yes, absolutely. Vodafone recently selected and deployed NAGRA cloud.SSP to secure its multi-network TV service, Vodafone TV (VTV), across several countries, which enables them to secure multiple network types – including IPTV, hybrid broadcast and OTT – using a single content protection platform, as well as streamline all device use cases by combining the NAGRA Connect client for converged CAS/DRM content protection on set-top boxes along with comprehensive multi-DRM support for open devices.

Telefónica also recently deployed the NAGRA Security Services Platform (SSP) and the NAGRA Connect client to secure their Movistar IPTV service and 4K Ultra HD content for their worldwide IPTV deployments. This enables a robust and comprehensive 4K and IP-ready content protection solution that can seamlessly deploy across device generations, regions and markets.

***What about the future of service protection?***

As we look to the next generation of content security, the imperative for operators is to offer a scalable and modular system for managing multiple environments across existing and newer generation client devices.

This also means giving service providers complete control of content value protection across all their networks, devices and use cases, along with anti-piracy services and tools like forensic watermarking, that provide additional security measures to keep premium content secure.

Looking ahead to IBC 2019 and beyond, with conversations dominated by the prospect of anytime, anywhere content delivery, the key will be to stay on top of new content security challenges as they arise while proactively laying the foundation for a more comprehensive approach to protecting their service at large – including a consumer's home network as consumers increasingly embrace IoT devices.

So ultimately, scalable service protection benefits everyone in the ecosystem: for service providers it simplifies customer acquisition and extends their market reach to the natural adjacency of broadband security, and for consumers, it delivers more convenience and value to safely enjoy the content they love.

# Disney unveils international launch plan for Disney+

**Global media giant Disney has unveiled plans for the international launch of its forthcoming streaming platform Disney+ in four countries.**

The service will launch in Canada and the Netherlands in tandem with the US launch on November 12. That will be followed by a launch in Australia and New Zealand on November 19.

The service will be competitively priced at €6.99 per month (or €69.99 per year) in the Netherlands, while the service will cost CAD$8.99 (€6.14) per month (or CAD$89.99 per year) in Canada. It will be priced at A$8.99 (€5.50) per month (or A$89.99 per year) and NZ$9.99 (€5.73) per month (or NZ$99.99 per year), in Australia and New Zealand respectively.

Users will be able to subscribe to Disney+ directly or via in-app purchase on Apple TVs and iOS, Google's mobile Android and Android TV devices, Microsoft's Xbox One, Sony TVs, PlayStation 4, and Roku streaming players.

The announcement follows Disney's quarterly earnings call, and confirms CEO Bob Iger's statement that international rollout for Disney+ would come very quickly.

"We will launch in international markets very quickly," the CEO said. "I think two actually are going to launch when we launch Disney+ around the same time. And then over the next two to three years, we're going to roll out in a number of other markets."

Disney+'s launch in The Netherlands also in part confirms a previous report from *The Information* that said the company had plans to use the country as a test market. The report claimed that Disney views the Netherland favourably due to its high broadband penetration and the success of SVOD services in the country.

During its quarterly earnings call, Iger also confirmed a US$12.99 (€11.80) bundle of its three streaming services – family-oriented Disney+, sports service ESPN+ and adult-oriented Hulu.

# Joyn partners aim for winter-premium launch

**Joyn, the German streaming joint venture between ProSiebenSat.1 and Discovery, will likely add its premium SVOD tier to the existing free offering over the winter with over 10 original shows, a "vast library" and next year's Olympic Games, with plans for international expansion next year, according to ProSiebenSat.1 chief executive Max Conze.**

Speaking on ProSiebenSat.1's latest quarterly earnings call, Conze said that Discovery was "fully committed" to the project and that the pair would "begin to look at expansion beyond Germany in 2020".

Conze hailed the success of the free advertising-supported version of Joyn that is currently available, noting that the 3.8 million monthly active users recorded for the first month of operation was four times the base of the previous 7TV service. He said he was hopeful that Joyn would surpass its target of 10 million users in two years "much faster" than anticipated, noting that the Joyn app had been downloaded 2.5 million times.

The Joyn partners plan to expand the availability of the service imminently with launches on Chromecast and additional smart TV portals through the autumn.

Conze said that Joyn was a "mobile first experience" with current consumption evenly split between live and library content.

# In brief...

**Telenor completes acquisition of majority stake in DNA**

Telenor has completed the acquisition of a majority stake in Finnish cable and telecom operator DNA. The Norwegian telco has acquired a 54% stake in DNA for a total of €1.5 billion following approval of the deal by DNA shareholders and a regulatory green light. The company will be consolidated in Telenor's accounts from today. The acquisition brings Telenor into head-to-head competition with Telia as the two biggest players in the Nordic market. DNA is the third largest mobile operator in Finland, with 2.9 million subscribers, a 28% market share. It is also the second largest broadband service provider and operates the country's biggest cable TV service. In 2018, it reported revenues of €912 million.

**Kwesé Free TV gets green light from South African regulator**

South Africa's media and communications regulator ICASA has confirmed that it is granting a commercial free-to-air TV licence to Kwesé Free TV. The watchdog said that Kwesé Free TV's proposed service complied with the relevant South African laws and met a market need. It also judged that the outfit's business plan and means of financial support were adequate and that the group had the expertise and experience necessary to run a broadcasting business. Kwesé also secured a related radio frequency spectrum licence giving it 55% of the country's third digital multiplex. The granting of the licence opens the way for Kwesé to offer a bouquet of channels offering sport and general entertainment content. The JV has propsed the launch of five channels: Kwesé Free Sports HD, Kwesé Brave Kwesé Focus, Kwesé Vibes and Kwesé Drama. The award of the licence to Kwesé Free TV comes despite the collapse of Kwesé TV, the pan-African satellite TV service owned by Econet Media, in August.

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# Sky expands line-up with new entertainment channels

**Pay TV operator Sky has announced the addition of two new own-brand channels to its entertainment portfolio in the UK: Sky Crime and Sky Comedy, taking the total of Sky-branded channels from four to six.**

Both channels will be available to all Sky customers at no extra charge, and as a part of the Now TV Entertainment pass for Now TV customers.

Sky Crime, which launches in October 2019, will play host to "premium US true crime" shows from from US pay TV networks Oxygen and HBO. The channel's key shows include *I Love You, Now Die* and T*he Disappearance of Susan Cox Powell*.

The other channel, Sky Comedy, will launch in February 2020, and air scripted US comedy from HBO, NBC and Showtime including *Curb Your Enthusiasm*, *A.P. Bio* and Dwayne Johnson-starring *Ballers*.

Sky Comedy will also house US talk shows like *The Tonight Show Starring Jimmy Fallon* and *Last Week Tonight with John Oliver*.

It is worth noting that many of the shows featured on Sky Comedy currently are broadcast on Sky Atlantic, the broadcasters US-dedicated entertainment channel.

"Sky Crime and Sky Comedy are fantastic additions to our entertainment portfolio, providing our customers with two new destinations for their favourite shows," said Zai Bennett, managing director of content at Sky. "Sky Crime, the home of premium true crime, will complement Sky Witness perfectly, while Sky Comedy is an exciting new proposition for Sky customers, offering them a daily dose of the best US comedy which will sit alongside our expanding slate of Sky Original comedy on Sky One. By investing in the best of the US as well as doubling our investment in original drama and comedy, we are making Sky an unbeatable destination for the best range of premium TV."


Sky's entertainment portfolio now includes six core channel brands: Sky One, Sky Atlantic, Sky Witness, Sky Arts, Sky Crime and Sky Comedy.

# Liberty Global focusing on 'core markets' for acquisitions

**Liberty Global will focus on its "core operating markets" for any acquisitions or investments it makes from the proceeds of the sale of its German and central European assets to Vodafone and the forthcoming sale of UPC Switzerland to Sunrise, according to CEO Mike Fries.**

Speaking on the company's latest quarterly earnings call, Fries said that Liberty was "more interested in buying, building and operating scale businesses in geographies and sectors we understand than spreading capital around".

Fries said that Liberty would be "very, very selective" about making any investments outside of its core markets or core capital structure, and would not "buy something nonsensical".

He said that the company would look at any opportunity "to solidify and grow the businesses that we already own and operate" and said that the company's stock was currently undervalued, with zero or negative value attached to Virgin Media, "which is incredible to me".

Fries admitted that the company had "a disappointing quarter on the subscriber front" and that there was "no other way to describe it". He said that the UK market had "definitely slowed down a bit" but that Virgin Media would continue to focus on higher value customers rather than "chase after growth" at the low end of the market.

Referring to VodafoneZiggo, Liberty's JV with Vodafone in the Netherlands, which performed well in the most recent quarter, Fries said that there was "little value" to talk about a change in structure currently but that Liberty was "very pleased with the business as it sits today".

Turning to the Netherlands and Liberty's other markets, he said: "We are invested in these markets. We have confidence in their prospects. And we'll look to fortify or capitalise on our position, if and only if, attractive and compelling opportunities arise."

Fries has in the past indicated that Liberty would at some point have to come to a decision about whether to buy out Vodafone or sell its stake in the venture.

Fries' comments come as Liberty announced it would return cash to shareholders by buying back shares through cash tender offers of up to US$2.5 billion (€2.2 billion).

Liberty Global is launching cash tender offers of up to US$625 million for its class A ordinary shares and up to US$1.875 billion for class C ordinary shares, to be purchased at a price range expected to be between US$25.25-US$29 for the class A shares and US$24.75-US$28.50 for the class C shares.

The company also promised further investment in Virgin Media. During the investor call, Fries said that there was "a huge opportunity to create value and demonstrate value in the UK" and said that the company would "be thoughtful about what the best allocation of capital is".


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# The DTVE interview:

## Eamonn O'Hare, Zegona Communications

**Eamonn O'Hare, CEO of UK-based Zegona Communications – the biggest investor in Spanish telco Euskaltel – talks to DTVE's Stuart Thomson about the attractions of the domestic market and opportunities further afield.**

It is now four years since Zegona Communications, the investment outfit set up by former Virgin Media executives Eamonn O'Hare and Robert Samuelson, invested in a relatively small-scale cable operator in the Asturias region of northern Spain, at a time when it was far from obvious that the Spanish telecom market represented an attractive opportunity.

The country was then just beginning to recover from the fallout of the 2008 financial crisis and the telecom market was characterised by intense price competition.

O'Hare, the former Virgin Media chief finance officer who serves as Zegona's CEO, saw that the Spanish market offered a number of advantages that made it a fertile ground for investment, however. Not all of these were in place in 2015, but the possibility of change was there, he says. The economy was showing distinct signs of life, and Zegona could see that the price-based competition among providers that was then prevalent would have to give way to a more rational way of doing business. It is also a market that was consolidating. Last but not least, says O'Hare, there were assets available to buy.

Zegona, which was created to invest in underperforming telecom, media and technology assets with a 'buy-fix-sell' strategy, was able to acquire the smallest of the three regional cable operators that have a significant grip on the TV and telecom market in northern Spain. Having lost out in a competition to acquire Galicia's R to the Basque Country-based Euskaltel, it purchased Asturias-based Telecable and sold it to Euskaltel two years later, delivering a 42% return to investors and securing a 15% minority stake in the operator.

Now Euskaltel's largest shareholder with a stake in excess of 20%, Zegona has set about pushing for a more ambitious expansion strategy under new CEO José Miguel García, who was responsible for the development of telco Jazztel prior to its acquisition by Orange.


"We saw that all three operating assets could be improved," says O'Hare, citing the need to get a grip on capital expenditure and improve customer service.

O'Hare also believes there will ultimately be further consolidation in Spain, with the number of cable players reduced from two to one. "I'm not obsessed about how the combination will work," he says. "There are many permutations, but the scale piece is important, and the synergies are important."

For now, consolidation is less important than putting Euskaltel on a growth curve. This means two things: "One is sorting out the business in its current footprint, where there is a legacy of putting it together with two other assets that didn't completely integrate – which will deliver incremental cash flow. The other is a unique opportunity to expand outside its geographic footprint beyond the 15% of the country that it currently serves."

## National expansion

Euskaltel, which has until now been hemmed into the three regions of the Basque Country, Galicia and Asturias, could continue as it is, generating cash but without "great growth prospects", he says. Alternatively, it can step out and redefine itself as a player on the national stage, something that the Spanish market favours, uniquely in O'Hare's view.

"Spain offers two things that are unique in our view. You can get access to fibre at economically viable rates – meaning you can go to Orange and possibly other providers and get access to their fibre, which is hard to do in some other markets. And you can get access to data-rich mobile networks with an MVNO agreement that doesn't imply the squeeze on margins this often means," he says.

The position of MVNOs in Spain can be contrasted, for example, with that of Sweden where cable operator Com Hem, which struggled to develop a mobile play that could be sustainable, recently merged with Tele2 in order to develop a convergence play.

For O'Hare, Euskaltel will also benefit from the fact that the Spanish market is "very far ahead" of most other European countries in terms of fibre infrastructure investment and, crucially, from the existence of a thriving wholesale business driven by Orange that allows operators to target specific localised markets to test the waters.

"You can choose a city, and then a suburb of that city, start off small and work out if people are going to buy. If they like what you offer, you can convert from wholesale to a mutualisation model," he says. The latter involves taking a long-term lease with better terms.

To capitalise on the advantages that the structure of the Spanish network business offers and build a national presence, says O'Hare, Euskaltel also needs a brand that resonates beyond its northern Spanish core markets. Zegona, whose executives came out of Virgin Media, has been associated with moves to take the Virgin brand to Spain and O'Hare says this "a very viable option", with research indicating the brand resonates with younger Spaniards. However, he stresses, it is not the only option.

O'Hare emphasises that he does not see Euskaltel as a 'disruptive' brand on the model of Xavier Niel's Free in France. "We believe in orderly markets," he says. "If Euskaltel can secure a small slice of a big and growing market it will be transformational for the company." He points to the success of mobile operator MásMóvil, which has grown its fixed business from virtually a standing start to over 1.2 million subscribers in just two and a half years.

TV, he suggests, will be a key differentiator for Euskaltel as it expands nationally, with an emphasis on functionality over exclusive content and big bundles that characterises the competition.

"Euskaltel is about its proposition of super-fast broadband, data-rich mobile, fixed phone and also TV. TV means skinny content. The Spanish market today is about 'more for more', meaning full-fat bundles at a high price," he says. "We can provide high-quality TV functionality with a skinny content bundle and we think that works because you can give people high-quality TV combined with fibre."

The deployment of an Android TV set-top combined with features such as network-based DVR and live pause and rewind as part of a €50-60 multi-play bundle gives the company "a reasonable chance to capture a small piece of a growing market", says O'Hare.

"We are hoping to capture people wanting to pay a smaller amount for a high-quality TV experience with free TV and pay TV options," he says.

Euskaltel has stood aside from offering La Liga football, with O'Hare characterising the current market for premium football rights in Spain as "irrational", with Telefónica paying a large sum for rights and seeking to recuperate some of that investment by selling those on to other operators – though only Orange has signed up.

Despite Vodafone's well-documented subscriber losses attributed to the absence of football from its content line-up in the face of aggressive poaching of its football fan customers by Telefónica and Orange, O'Hare is sanguine about the absence of the sport from Euskaltel's offering. He believes that the economics of football on TV in Spain do not currently make sense.

"The dynamics will sort themselves out over the next few years and the irrational economics of it will disappear over time," he says, adding that the impact of not having football will be limited to some extent by the national habit of congregating in bars to watch matches. In the meantime, he says, "Euskaltel is not part of the football equation and our national expansion will not be centred on that".

> "The customer service equation is vastly more important than whether you have fibre that goes from A to B and then coax. A lot of telcos get carried away with engineering"

## Investment opportunities

O'Hare says that Zegona was created to take a "hands-on, operating company approach" to the assets it invests in, rather than as a "deal machine" looking to make a quick exit.

The company, he says, "looks at a lot of opportunities" and rejects most because they don't match its criteria. Its stake in Euskaltel is currently its sole investment, which leads O'Hare to mull on an apparent discrepancy in value between the value of that stake and Zegona's own market capitalisation.

Zegona's shares currently trade at a substantial discount to the value of its stake in Euskaltel, something O'Hare attributes to lack of awareness about the company's specific circumstances. One hundred per cent of Zegona's earnings are denominated in euros, meaning that it benefits from the decline of sterling's value. Euskaltel pays a healthy dividend that goes straight back to Zegona's own shareholders.

O'Hare also points out that Zegona could in theory transfer its stake in the Spanish operator in specie to its own shareholders, some of which are already direct shareholders in Euskaltel.

"We are not exposed to Brexit and we pay a good dividend. We are a bit under the radar and we think this is a capital markets anomaly that we are determined to fix," he says.

O'Hare says that Zegona is focused on staying on as an investor in Spain for a number of years but adds that the company will continue to look at other investment opportunities. He identifies a number of 'themes' that are attractive, including mid-sized cable operators like its existing asset. He says that small incumbent telcos "of which there are many" are also interesting, as are mobile-only operators "but only in certain circumstances".

O'Hare believes that the telco space – and specifically the small-to-mid-sized players that Zegona is interested in – is ripe with investment opportunities because alternative sources of finance have largely vacated the market.

First, big tier-one telecom operators have changed their strategy over the last few years from "planting flags around the world" to focusing on their core domestic and adjacent geographical markets. This focus to some extent follows the changing nature of their customers' needs, with a move towards convergent fixed and mobile packages, meaning that operators need a deeper presence in national markets to cater to this requirement.

The renewed focus on a deeper presence in a locality means there is a gap in the market for investors in those non-strategic assets that the bigger players no longer consider to be core to their business.

Second, other investors are also no longer in the market for telecom assets to the same extent as a few years ago. Private equity outfits, says O'Hare, are now more interested in technology assets: "Telecoms isn't doing it for them any more."

Third, entrepreneurial investors such as Altice founder Patrick Drahi, Iliad Telecom owner Xavier Niel or Liberty Global's John Malone face significant challenges with their existing assets and no longer appear to be in the market for further acquisitions.

The wider background is that the European telecom market remains fundamentally fragmented.

O'Hare estimates that there are about 180 significant operators across Europe, compared with a tenth of that number in the US. He believes there is a need for scale and a crying need for consolidation, driven by convergence, with fixed-line players acquiring mobile assets and vice versa.

The CEO believes this consolidation will happen, although with the caveat that the overall number of players is unlikely to dip below 100. "Scale matters for infrastructure and content," he says.

When it comes to that 'buy-fix-sell' strategy, what also matters, in O'Hare's view, is delivering great service and a proposition that customers will value.

For all the much-touted value of cable's network architecture, whether an operator has fibre, coax, copper or a combination of all three is largely irrelevant, he says.

"The customer service equation is vastly more important than whether you have fibre that goes from A to B and then coax. A lot of telcos get carried away with engineering," he says. "The marketing message and the way you treat your customers trumps infrastructure." ■

Enghouse Networks

# Q&A: Michael McCluskey, Enghouse Networks

Michael McCluskey, VP product management at Enghouse Networks talks about the challenges facing European Telcos, evolving business models and the advantages of a cloud based TVaaS model in delivering an advanced user experience.

***European telcos are under pressure to invest in fibre upgrades and 5G mobile without a clear path to making a return. What can they do to mitigate the risk and what role can video play?***

The business case for fibre upgrades and 5G deployment is similar to any technology deployment – it has to be based on increased/secured revenue and reduced costs. Video is an attractive and sticky service for consumers, but it is also a challenging business area as content costs are rising and competition increasing. By offering video services as part of their bundle, operators can increase revenues and reduce churn. They can also look to address new revenue streams via advertising and new markets via verticals. Enghouse Networks has more than 50 solutions catering to telcos to help them generate more revenue streams. Our recent acquisition of Espial has added a state-of-the-art IPTV solution in our bank of solutions and products.

***Why does it make sense for service providers to migrate to IP video?***

Cable operators may not offer IP video, and for them, this may be a transition, but many telcos have been offering IP video for years. The real transformation is a digital transformation enabling a business transformation around how operators run their business, and technology is a key enabler of this.

We believe this transformation is focused around four key imperatives:

i. Transform how you reach, acquire, and onboard customers: target subscribers where they are using the web and social media and onboard them in a fully automated manner

ii. Centre your customer view around lifetime value: continuously monitor consumer usage of the service and adjust the offer based on this feedback to ensure always happy consumers

iii. Differentiate on customer service: be proactive in addressing issues – don't wait for calls to the call centre

iv. Adopt new business models that drive new revenue: More granular segmentation, advertisement options, and verticals

***What new video services and applications could be enabled by 5G?***

5G can offer multiple opportunities for video delivery. Operators who do not provide video services over mobile can video services to their offer to increase stickiness and revenues. Operators can use 5G as an alternative for fibre or other access – expanding addressable markets by reaching a broader range of subscribers. 5G offers the capacity for 4K video and VR/AR services.

***What are the main challenges facing providers in delivering advanced video services across multiple networks and devices?***

The video industry is fast changing with direct to consumer (D2C) and OTT services exploding. The cost of content continues to rise to place pressure on margins. Content contracts can require significant restrictions around services (e.g., time-shift services, ad-skipping, black-outs, delivery location/devices) that need to be supported for any deployment. Support for legacy devices/technologies may be required for existing deployments for some time. New business models continue to evolve around advertisements – mainly targeted/high-value ads and around two-sided business models required by advertisers and content owners.

***What are the main options for service providers looking to provide an advanced TV user experience on set-top boxes as well as other connected devices and to what extent does it make sense to lean on cloud technology to deliver this?***

a) There are really two high level approaches: build and operate it or outsource the build and operate (TVaaS) – either approach can leverage cloud technologies and approaches.

b) The traditional build and operate approach is challenging as it usually triggers a high business investment risk:

i. High up-front investment

ii. Long time to revenue

iii. A 'build it and they will come model' that means forecasts need to be accurate

iv. Ongoing investment for support, innovation and refresh

c) The TVaaS approach completely removes the business risk:

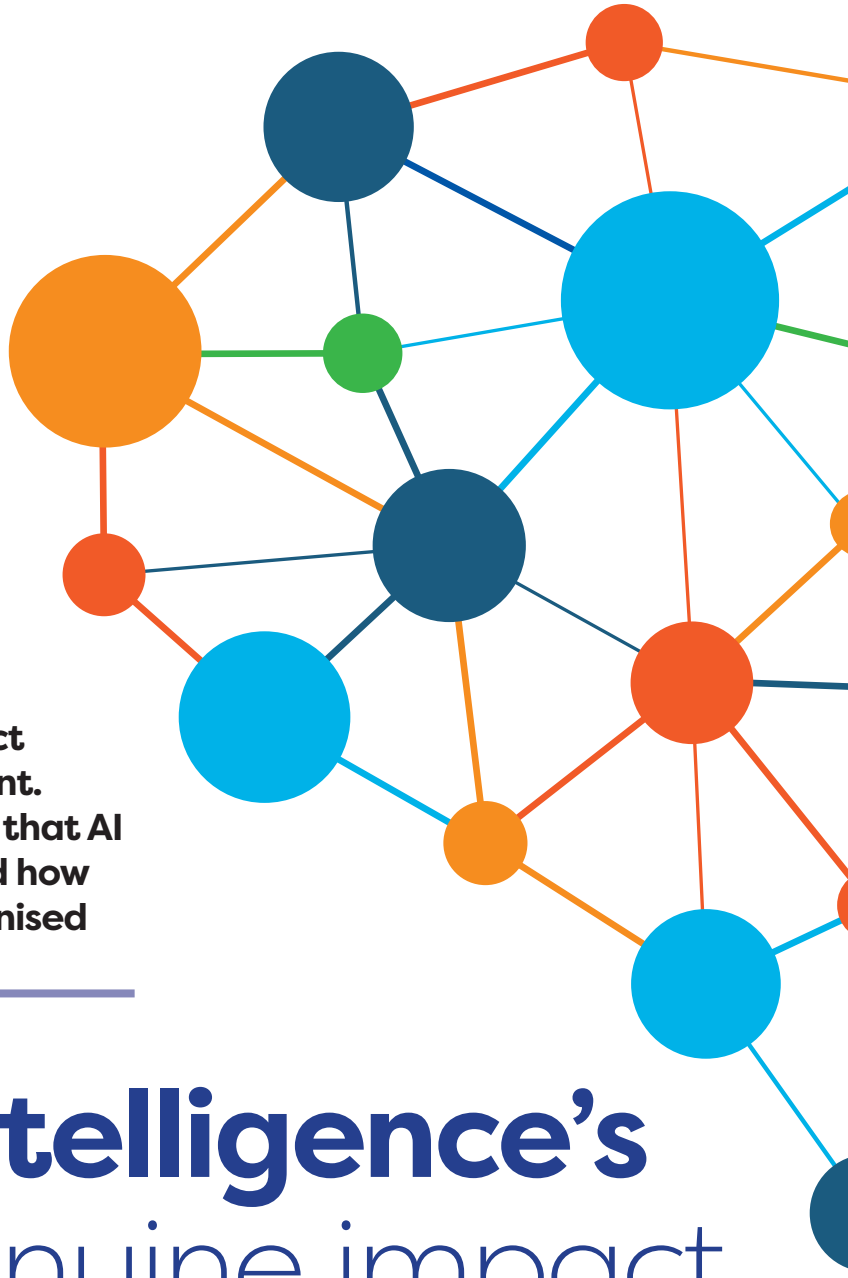
i. Low up-front investment

ii. Fast time to revenue

iii. A build it as they come model which keeps costs in line with revenues independent of forecast accuracy

iv. Costs for support, innovation and refresh are included

d) Cloud-based TVaaS approaches are much better-suited to the video business vs traditional approaches. Our Elevate IPTV solution is based on the cloud-based TVaaS approach. You can learn more on espial.com/elevate



**Automation is affecting every aspect of modern living and TV is no different. Jonathan Easton examines the role that AI is playing in the user experience and how 'the algorithm' has quietly revolutionised the way we view content.**

# Artificial intelligence's genuine impact

Every few years, a new fad takes the industry by storm. In the early part of this decade it was 3D, and after that it was virtual reality, augmented reality and everything in between.

Seasons change, and invariably the last big thing drops out of the zeitgeist in favour of the new shiny gimmick. But artificial intelligence (AI) is no such fad. AI is not being marketed as a selling point for consumers, and its success to date is linked to how discreet its impact is on the TV user experience.

There is, of course, the more visible manifestation of AI in voice assistants, but that is largely about control. Requests like "show me live sports", or "what's the weather?" are reliant on AI to handle the request, but this is mostly about language processing to get to a fixed outcome.

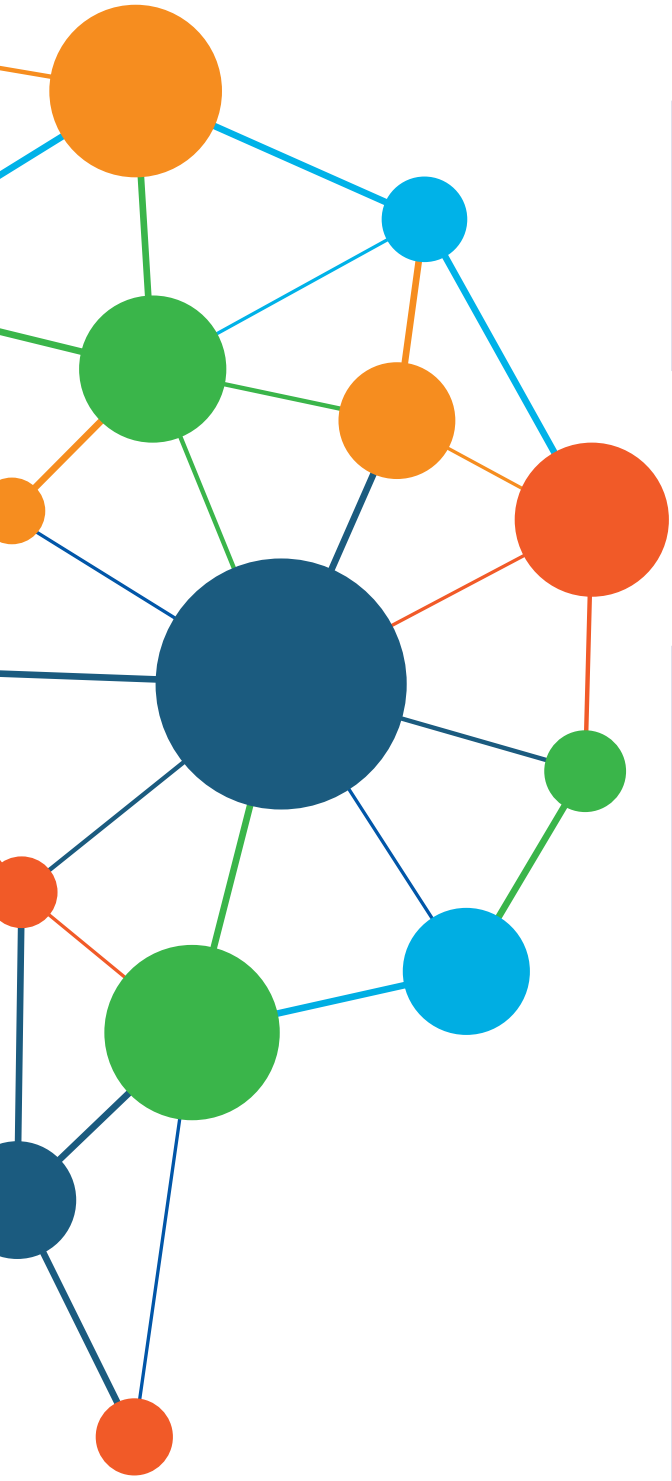
In terms of the day-to-day user experience of TV, good AI is unseen and unheard.

However, before diving into what this AI is achieving in real world terms, one of the first hurdles is actually figuring out what AI – a fuzzy and historically ill-defined term – actually means.

Quite unsurprisingly, this depends on who you speak to.

## Defining AI

"It's a particularly broad term," admits Jon Ducker, head of product management at Digital UK. "For us, AI represents any technology that can be used to drive automated, complex decision making without requiring low level



human input at the individual decision level. So, in TV this could manifest as anything from voice assistants and recommendation engines processing TV requests, through to more operational applications of AI such as automated webchat services."

Marcus Bergström, CEO of OTT video platform vendor Vionlabs has a similarly succinct summary: "We define AI as: trained by humans and then perfected and enhanced through continuous and exponential machine learning."

TiVo's head of product for personalised content discovery Chris Ambrozic is more concerned with defining machine learning and AI by how they relate to other aspects of business.

"I have a very technical way that I define machine learning and AI," he says, "Machine learning is defined by matrix factorisation [algorithms used in recommendation systems] and being able to reduce a variety of data sets to an interesting signal for a variety of business purposes. On the AI side, it comes down to neural net [a computing system that learns based on previous examples], which is really good at predicting things but not so good when you try to use that to understand what's happening and why."

AI's purpose can loosely be summarised as algorithmically-driven automation that drives the improvement of services from both a business and user perspective.

The most prominent way this is being experienced by users is, as Ducker says, through voice assistants and personalised content curation.

Caroline Cardozo, head of content, discovery and personalisation at Sky says that the latter is simply an extension of its role as a platform operator.

"We know from speaking to our customers that they expect us to recommend content to them," she says. "As we learn more about our customers' behaviours we're using AI to adapt and tailor the experience. We want the shows we're recommending not only match our customers' tastes but to also create a sense of serendipity when they discover something completely new that they may not otherwise have given a second thought to. Be it the latest drama on the home page or content recommendations for movies similar to those you have watched before, artificial intelligence is making the customer experience more relevant. And by gathering continuous feedback, we're able to see trends, adjust and pivot to continually challenge and improve the experience."

## Updating old patterns

It is clear just how much AI has changed the measurement of user activity and popularity of content.

Organisations like BARB in the UK and Nielsen in the US have spent the better part of a century using relatively similar measurement tools for gauging the success of shows and networks. The story more or less begins and ends with how many people watched a particular bit of linear programming, and its success is defined by this. This measurement has since extended to online viewing (BARB now cites the two as discrete sources of data), but the lesson learned by broadcasters has always been to simply make more of the successful content and less of the rest.

But while much stock is placed in these ratings, they only paint part of the picture – and AI is illuminating the rest.

There is one word that repeatedly comes up when talking to industry figures about AI: context.

Context, with traditional linear programming, is mostly derived from holistic knowledge of broadcast schedules. For example, a particular show might perform poorly if it's pitted against a sports event or aired on a bank holiday.

But AI is able to provide a lot more information, and by extension a greater degree of context to actions both in terms of set-top box interactivity and OTT VOD services.

> **We define AI as: trained by humans and then perfected and enhanced through continuous and exponential machine learning**
>
> Marcus Bergström, Vionlabs

What show did the user watch? Did they watch the entire thing or turn it off mid-way through? Is the show similar to other content they watch? What did they watch before and after? What day and time did they watch the show?

"The team uses machine learning when it's not just a function of trying to predict something for somebody, it's a matter of understanding what got them there," says TiVo's Ambrozic.

"We can quite easily predict what you're going to watch on a Tuesday night, but it's an entirely different matter to be able to explain that in the context of why we think that's the right prediction for you."

By piecing together answers to these questions and more, an AI engine can passively create a profile to give greater prominence to content the user is more likely to be interested in, and conversely help content reach its target audience.

Ambrozic continues: "We'll employ different strategies and tactics in order to help you find the content you're looking for, and find it in a very efficient manner. We have algorithms that are very predictive in nature that are picking up on those signals."

But AI is not just for content discovery in VOD, Bergström points out. "By accurately understanding the VOD content, the VOD library could actually be the foundation for creating hyper-personalised linear programming."

This is a sentiment shared by Angelica Stephenson, senior manager, strategy and innovation at Sky. "In the future we could see automatically generated highlights of sports or entertainment being made for viewers, summarising what they've missed based on the topics they've shown they like," she says. "There's also the creation of bespoke channels and even promotional posters for TV shows and films in the EPG, that are specifically selected for the viewer."

All of this however seems to suggest a somewhat problematic closed feedback loop that simply reinforces user behaviour rather than being truly innovative.

"Content management and recommendation systems today are more advanced than they used to be, and simplistic 'personalised' services recommending content


Sky Q utilises AI to present personalised content suggestions to users

based primarily on similar content are likely to have limited impact, particularly if they don't understand much about the user or the viewing context," says Ducker.

"The big win for AI, ironically, is to replicate those moments of serendipity we used to get when flicking through channels and discovering something awesome that we'd never heard of before through pure luck – or expert scheduling of course. In order to address this, companies can combine content recommendations algorithms with more traditional campaign management features, applying increased weighting to specific assets or content types. In this world, content promotion and content personalisation can easily become blurred."

## Blurred lines

Not all content is created equal, after all, and platform operators will want to ensure that their own content is seen by more people.

For example, Netflix pours hundreds of millions of dollars into its original content and as such has a reason to get as many eyes on those shows and movies as possible.

Ducker says that these AI content delivery systems are "still deployed, owned and supervised by human individuals working for companies with commercial interests."

He continues: "Despite the friendly names and increasingly relatable voices on the front-end, it would be naive to think of AI in its various forms as a purely benign enhancement to our ongoing search for compelling programmes. They are, or at the very least have the capacity to be, biased towards the interests of the companies that have the most influence over them."

From a content perspective this can lead to the platform operator's content getting a better position, but AI can also be utilised by advertisers.

Stephenson points out that, once again, context is key: "Contextual advertising is clearly an area of opportunity. For example, if the last scene before an ad break was distressing, AI could display ads offering tissues or ice-cream during the break. This is very of-the-moment experience which starts to really fine tune the idea of personalisation."

While Stephenson's example is fairly innocuous, many consumers are uneasy about data capture and companies selling their data.

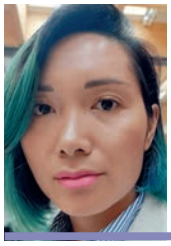
Ducker once again favours erring on the side of caution, but believes that "customers understand and appreciate this, particularly when operators, as trusted brands, behave in a way that is transparent and open".

"Data tracking is a sensitive subject, but the recent introduction of GDPR has really helped drive consumer awareness and understanding, and operators must now be much clearer about how and why customer data is being used. For responsible operators this can only be a good thing, and in embracing these changes we now have a fantastic opportunity to be clear about the benefits of personalised services," he says.

## Cutting churn

One of the biggest challenges facing the digital TV industry in this cord-cutting era is churn, and this is something that AI is also helping to mitigate.

"Today it's much easier to get hold of data, but understanding what the data is actually telling us and getting value from it can be more challenging," notes Cardozo. "Continually training models can take time while stakeholders want the business benefits realised relatively quickly. There is also still some way to go before predictions can be guaranteed to be 100% accurate. If customers don't feel listened to or they feel the experience is no longer tailored to them then that could change their whole view of what they are paying for."



**Contextual advertising is clearly an area of opportunity**

Angelica Stephenson, Sky

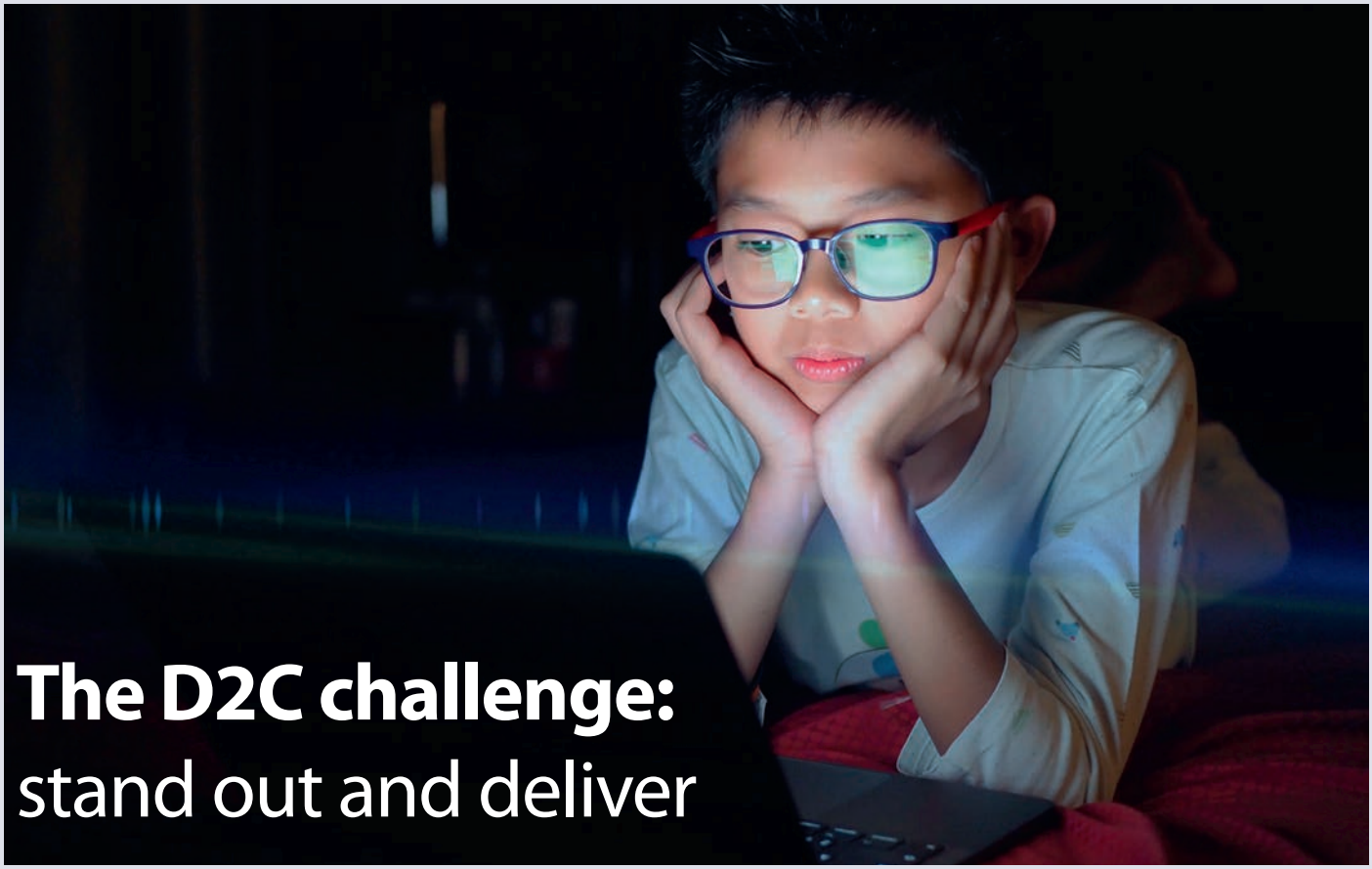
Ambrozic believes that AI has a significant role to play in providing added context to churn and helping to prevent it.

"We don't just want to know the fact that they may churn and give a prediction score for their propensity to churn, we also want to know why. If we can understand why, we can start to engage behaviours or drive a change in the behaviours that may actually impact their propensity to churn. This is where we see the utilisation of personalisation and strong metadata taking us," she says.

"We can identify with a fair degree of accuracy individuals that have a propensity to churn, break that down and say the reason why we think these individuals are going to churn. From there, we can then feed that back to the marketing department and say 'you might need to do some targeted outreach with these individuals to make them aware of content that is actually quite appropriate to them'."

Whether it is cutting churn or enhancing content discovery, AI is already having a huge, and arguably irreversible, effect on how the user experiences TV.

While rules and regulations around data are likely to come under more scrutiny in the coming years in a post-Cambridge Analytica world, AI is here to stay. For operators, it is up to them to create a compelling user experience and earn the patronage of their users. ■



# The D2C challenge: stand out and deliver

**Tim Ruhl and Adam Davies of Synamedia talk about the challenges of standing out, winning and retaining customers in a crowded streaming market.**

The direct-to-consumer video business is becoming more competitive by the day, fuelled by a recent proliferation of live-streaming services adding to the well-populated field of OTT TV propositions currently available.

In this environment, standing out from the crowd while delivering a compelling user experience – and profit– is becoming more challenging than ever for service providers.

In addition to differentiating their proposition, streamers – including those taking on the challenges associated with live-streaming –not only have to win and retain subscribers but must do so in a way that provides at least the prospect of a not-too-distant return on the investment required to get their offerings up and running in the first place.

"Consumers are getting pickier and from a D2C perspective, the compelling proposition will be a personalised service with flexible pricing and packaging that fits their lifestyle," says Tim Ruhl, senior product marketing manager at Synamedia. "They will tune in to see content that suits their taste but is also delivered at high quality to all screens that they want to use."

Launching a sustainable service means having a clear route to profitability, something that cannot be taken for granted in the online video world. The clearest route to turning a profit is to tap into one of the biggest potential benefits that streaming brings – the ability to deliver content globally.

"Services need to be built for scale and that means global scale, with a single platform that extends reach across multiple territories. This may mean one platform that media companies can use to manage multiple brands to create niche offerings with differentiated catalogues that resonate with their customers," says Ruhl. "You also need to be able to cost-efficiently deliver content to all end points. Each region may be different in the platforms that are popular – for example Roku is more popular in the US – so you need to build one platform that can deliver a consistent experience across all devices that can be easily configured."

A single platform delivering content to multiple populations can return valuable data and insight to service providers too. Adam Davies, product manager for advertising and analytics solutions at Synamedia, says that such a platform can provide "a single source of truth" about what engages consumers that can be used to recommend content and enables the delivery of targeted, personalised advertising.

Davies says that Synamedia's Infinite platform can serve as an enabler for service providers to process, secure and distribute content in an integrated way. "We have virtualised the entire platform including the data plane and management components so that we give the service provider the flexibility to distribute content and upgrade his service as required, using the cloud but at a cost that makes sense for the operator's particular profile," he says.

## Live streaming and advertising

Live and time-shifted TV is increasingly part of the streaming experience, and Ruhl says that one of the main challenges facing service providers is to ensure seamless switching between broadcast TV and the streaming offering.

"We have invested in providing synchronised latency so that all screens receive the content at the same time," he says. "This is a huge challenge. You don't want one stream to outpace the other. It is about making the streaming version just as good as the broadcast."

Additional challenges include managing the cost of delivering live events. Smart management of how CDNs are used combined with a focus on optimising the encoding of video play a key role. Synamedia has introduced smart rate control – a technology that is designed to anticipate the subjective perception of the human eye to maximise the efficient use of bandwidth.

The need for synchronised delivery across all screens is in part driven by the fact that, for advertising-supported services, campaigns also have to be seamlessly integrated.

"Service providers want to be able to sell the audience rather than sell timeslots," says Davies. Synamedia's platform can enable this, providing frequency capping – so that viewers don't see the same ad too many times – and addressability across multiple screens from a single campaign management system.

In addition to delivering smart advertising, service providers can tap the power of data to anticipate the twists and turns of the individual customer's journey, from signing up for a service to churning and beyond.

"We can create a unified data-set based on anonymised digital profiles, and we can aggregate and abstract that data to a common platform to understand viewing habits over time," says Davies.

Analysis can help predict when particular users will churn, which users are likely to renew subscriptions at a later date and which are likely to upgrade or downgrade between free and premium options.

Service providers can use this knowledge to shape their offerings and marketing messages, moving away from traditional A/B testing and other legacy methods and instead using personalised data to drill down to the level of personalised offers, such as offering subscription 'holidays' to users that sign up for particular sports competitions and are expected to churn once the season ends. Users can also be targeted with specific offerings based on the devices they use and other criteria.


*Synamedia's Infinite platform allows service providers to process, secure and distribute content in an integrated way*

"As the dataset grows you can identify patterns of user behaviour and what actions to automate, and investigate the efficiency of that action," says Davies. "You can automatically offer people a different subscription package for example. If you identify a pattern of usage that means a viewer is likely to churn you can set them on a different journey."

## The piracy threat

Ensuring that subscribers remain loyal also may involve taking on one of the major threats that streaming video services face: piracy.

"Piracy hits the profitability of everyone in the ecosystem – it is competition from people with few if any costs to bear," says Ruhl.

Synamedia, with its long history in revenue security, is tackling this issue by adopting a "holistic approach", says Ruhl. "With our streaming protection protocol we are focused on protecting not just the content – something service providers have historically done – but the service itself," he says.

This involves using human intelligence alongside automated detection of illicit streams. "We use a security team to track pirate networks and they use our in-house technology including predictive analytics and machine learning to verify that piracy is happening, identify the source and take appropriate action to ensure that the content is no longer available to be streamed," says Ruhl.

The task is made more complex by the range of ways in which security can be compromised. In addition to illicit streaming, service providers face the growing challenge posed by the illicit sharing of credentials. "We are all familiar with casual sharing of passwords but there is also a more threatening variant where fraudulent entities make a big business out of sharing and reselling credentials," says Ruhl.

Synamedia has invested in a credential fraud platform designed to predict where, when and what type of credential fraud is taking place. In the case of casual sharing involving family and friends, the system can push out marketing messages to persuade people to sign up for a legitimate package that better suits their needs, making it easier to keep honest. On the other hand, where it detects professional fraudsters, it can shut down a stream and disable credentials used to access the service.

Content rightsholders also have a role to play in ensuring that there is a very high barrier in place to prevent piracy, mandating the use of techniques such as forensic watermarking.

"Sports rightsholders and others need to insist that distributors invest in the highest quality technology and put in place a system that will monitor use around the globe. But it really has to be a community effort and the technology provider has to provide a complete service to monitor and take action where required."

Overall, says Ruhl, direct-to-consumer distribution raises challenges that can only be addressed with the help of a complex technology stack both to ensure a satisfactory user experience and the efficient collection and application of data.

"Synamedia is fully invested in that entire technology stack. We can launch, manage and maintain that, so that the operator can focus on their business. With the Infinite platform we will provide the tools to enable them to focus on their offering and brand while we manage the technology and platform in a fully integrated way," he says.

# View point

Stuart Thomson

# Three is the magic number for Disney

Disney recently unveiled its plan to bundle its new SVOD offering, Disney+ with Hulu and ESPN+ in the US for US$12.99 a month, a price point that would be highly competitive with Netflix and undercuts the reported US$16-17 a month likely to be charged by WarnerMedia for HBO Max.

Disney unveiled the plan for the bundle of three services with its fiscal Q3 earnings report, which also provided evidence of how much the company is betting on its D2C play. The Mouse House reported a negative operating loss impact of US$400 million (€365 million) from its investment in direct-to-consumer, and the D2C and international business segment is expected to generate an operating loss of US$900 million in the fourth quarter, up from US$560 million last year.

A lot is riding on getting the marketing right. Speaking on the Q3 earnings call, CEO Bob Iger said the bundle would be available when Disney+ launches on November 12, though only to US consumers.

Disney has hitherto placed an emphasis on the different audience segments to whom its three streaming offerings will appeal and has spent relatively little time highlighting their potential as a joint offering. Disney+ is expected to appeal to a family audience, while Hulu has a more adult appeal and ESPN+ obviously appeals to a different set of interests.

In fact, at the time of Disney's Q1 update, Iger played down bringing Hulu, ESPN+ and Disney+ together, and said that the company had taken the view that "we'd serve the consumer better by segregating all three". He did however say that there could be room for discounts for people who wanted to sign up for multiple services and Disney's ultimate goal was to have all its streaming services use the same technology platform.

The new bundling offer doesn't negate that stance, but it is interesting that Disney announced this well ahead of the launch date for the service. Iger says that the bundle will offer "tremendous quality and tremendous variety for a good price", with the three parts seen as complementary.

Disney plans to make use of all the marketing muscle it can muster, which, given its ownership of parks, hotels and multiple international networks is considerable. Members of Disney's D23 fanclub will be given first place in the queue to sign up for Disney+ itself. Iger said the new service would be "the most important product that the company has launched" during his time at its helm, which, as he helpfully reminded listeners, was "quite a long time".

Iger also said that Disney had also been in talks with potential distribution partners for Disney+, including the likes of Apple, Amazon and Google. "We think it's important for us to achieve scale relatively quickly, and they'll be an important part of that," he said.

Iger did not provide an update on plans to launch Hulu internationally, something he has spoken about in the past. Delivering a three-in-one package globally would involve a major untangling of rights – which comes at a cost – and, doubtless, the creation of differentiated offerings in each market rather than a neat one-size-fits-all package. Nevertheless, Disney's major investment in D2C across multiple offerings makes most sense if it can be delivered at global scale.

The company has previously made it clear that it is looking at "rapid expansion" globally for Disney+ in Europe, Latin America and Asia within two years, with a goal of signing up between 60-90 million international subs in a five-year timeframe.

> **"Disney's grand design for its premium streaming services sets it apart from other US media groups now fighting to secure a place in the D2C sun."**

Disney's grand design for its premium streaming services sets it apart from other US media groups now fighting to secure a place in the D2C sun. While the other players have hedged their bets to a greater or lesser extent, balancing securing revenues from licensing content against the prize of connecting directly with consumers, Disney is going for it.

Other media groups such as Viacom and Discovery have very different approaches to streaming. Viacom is leaning more heavily on the potential of advertising-supported VOD to monetise long tail content, while Discovery is focusing on creating a number of 'specialty stores' to deliver subscription revenues to complement its pay and free TV businesses.

While WarnerMedia is a bit closer to Disney in spirit, only the Mouse House really has the scale to take on Netflix and Amazon at their own game. And in some ways that game makes more sense for Disney, with its vast library of well-known titles ripe for exploiting, than it does for Netflix, which finds itself spending more and more cash on originals whose appeal is unproven, but are vital to retain and win subscribers in a world where the availability of attractive licensed properties is rapidly thinning out. ■

# Q&A: Ferdinand Maier, ruwido

Ferdinand Maier, managing director of ruwido, explains the company's vision of the 'convenient home' and how technology can be harnessed to realise it.

***What does ruwido mean by the concept of the 'convenient home'?***

We talk about the convenient home because we don't believe in home automation in the classic sense. People don't live in a machine. We don't talk about the smart home because a home can't be smart – only people are smart. Our head of scientific research, Regina Bernhaupt, who will also be chairing CHI 2020, the conference on human factor in computing systems in Hawaii, has conducted ethnographic studies on this and a key finding is that convenience is becoming a real value. In the past the value of a new product or concept was based on utility. Now we are seeing that the value of something is based on how much comfort it gives to the user and the perception of the overall user experience.

***What role can the company's technology and design expertise play in making this a reality, and how does the TICTACTILE. system fit into this vision?***

TICTACTILE. is the outcome of our extensive research with respect to this concept of the convenient home. It is a consistent and complete interaction system between people and entertainment devices, but also the total home environment. In order to make content more easily accessible it is important to offer a holistic experience for the user, no matter which screen is used to access content. TICTACTILE. closes the physical distance between the user and the graphical user interface and allows the synchronisation of mind and sense. In 2018 the TICTACTILE. system won the label 'best of the best user interface design' at the red dot awards, out of over 8,000 entries from 45 countries.

At IBC we will show an extended version that not only controls TV entertainment but also your home environment and that also has the ability to integrate the power of mobile devices. This is a revolution. In the future TICTACTILE. will be like the steering wheel in your car. The engine is complicated, but you only need to control the car with the steering wheel. The thing we do with TICTACTILE. is to organise different functions, appliances or devices in a personalised, but also a convenient, way. You can also use it to replace physical access devices – including the set-top box. Smart devices in the home have the power of hundreds of set-top boxes if you can control them in the right way.

***How big a role will voice control play in the realisation of the convenient home, and what are the limitations of this?***

Voice has a place – it is good if you know what you like. Based on our research, only about 25% of people are using voice control when they have it, and no more than 50% will ultimately use it, because they're embarrassed by the mic always being on. It's different with a multimodal input device, like our TICTACTILE. where you press a button, meaning you take physical action to talk and then to disconnect. Voice isn't really useful for 'analogue' activities like volume up and down, more light less light, but if you know exactly what you want it can be a part of everyday life.

***What do you see as the potential benefits of emotion-aware voice assistants?***

Today the smart speaker and recommendation engine are more focused on what the user is saying but not on how they are saying it. Things could be made more convenient for the user by basing the provision of services such as music playlists on mood. This is also about measuring mood over the long term to make people's lives easier and more agreeable. We believe measuring mood can be used to improve the design of the user experience of services in the future, and certainly improve recommendation but also in a further step to change available functionalities in the smart home. Regina Bernhaupt is going to deliver a presentation at IBC on this.

***To what extent do you believe that personal profiling – and personalised advertising – will deliver an enhanced user experience in TV?***

Personalised advertising can be a future revenue stream for service providers, but they need to know who is sitting in front of the TV. One of our latest approaches allows to build up personal profiles and to be able to recognise who is using it. This could enable more personalised advertising and also personal recommendations. It can furthermore make user experiences in the living room more holistic with regards towards what type of controls the user want to have set when starting to watch a movie e.g. turn down the lights or get the sofa in the right seat-position. Personal profiling is already a given fact in many areas and domains, and we think it will be interesting to the TV business as well. Of course we also know that the majority of TV viewing is still social, so there is a limit to personalisation, but that doesn't mean there is no room for it. We are convinced that it is important to consider both situations: social cocooning, with your family and friends, and individual media consumption.

*ruwido will be exhibiting at IBC, on stand Hall 1.D69*

# Data analysis

DTVE research partner Ovum's assessment of recent developments

## Disney's pivot streams into focus

Ed Barton, chief analyst at Ovum, considers the prospects of Disney+ in an increasingly crowded streaming market.

The launch of Disney+ in November represents a critical milestone in Disney's strategy to lessen its reliance on pay TV and TV advertising by building a direct-to-consumer streaming service. This is no ordinary streaming launch. It will ramp up already intense competition for the global premium video audience and is the culmination of years of preparation involving mollifying established distributor relationships, unwinding rights deals with competing streaming platforms, and ring-fencing investment to produce exclusives for the platform while forgoing, for the time being, the familiar incremental revenue generated for letting other streamers use its content, which we estimate at between US$250 million (€226 million) and US$350 million per annum.

Disney+ is launching at roughly the same time as two other notable streaming service launches: HBO Max and Apple TV+, both of which are also motivated by the impact Netflix has had on practically every aspect of premium video distribution. Ovum believes that Disney's go-to-market strategy is currently the most compelling, albeit with admittedly incomplete information regarding some of the details of the competing services.

Ovum is currently forecasting that Disney+ will attract some 10 million subscribers globally by end-2020, comfortably exceeding the growth rates we anticipate from Apple TV+ and HBO Max. Our outlook is driven by Disney's historic strength in producing intellectual property which resonates both globally and across age groups; its willingness to invest in exclusive, original shows and movies; its hard-won expertise in building and managing large-scale streaming platforms through its ownership of MLBAM; its global presence and established relationships with premium TV and video distributors, and the notably aggressive go-to-market strategy revealed for the US launch. Disney's publicity machine is moving through the gears for a November launch, and the initial reception of trailers for Star Wars spin-off The Mandalorian and Lady and the Tramp is encouraging, with 15 million and 10 million views of the trailers on YouTube, respectively, in three days.

Disney+ also raises the bar for value, with pricing apparently designed to make Netflix look, at best, ordinary. Disney+ offers four simultaneous streams including UHD for US$6.99 a month compared to US$15.99 a month to receive the same from Netflix, and offers UHD streaming with HDR and Dolby Atmos (and if you know what these are, you're probably a little bit excited at not being charged extra for them) as part of the standard price tier. Ovum believes that Disney's pricing is low enough to co-exist comfortably with Netflix (or another generalist streamer like Amazon), while also offering significant differentiators in price and functionality that constitute about the most credible competition Netflix has had yet. Disney+ pricing also looks tempting to what is likely to be a growing segment in maturing, saturated OTT markets: those who are bored of Netflix and Amazon and are looking for something new, even if only for a few months.

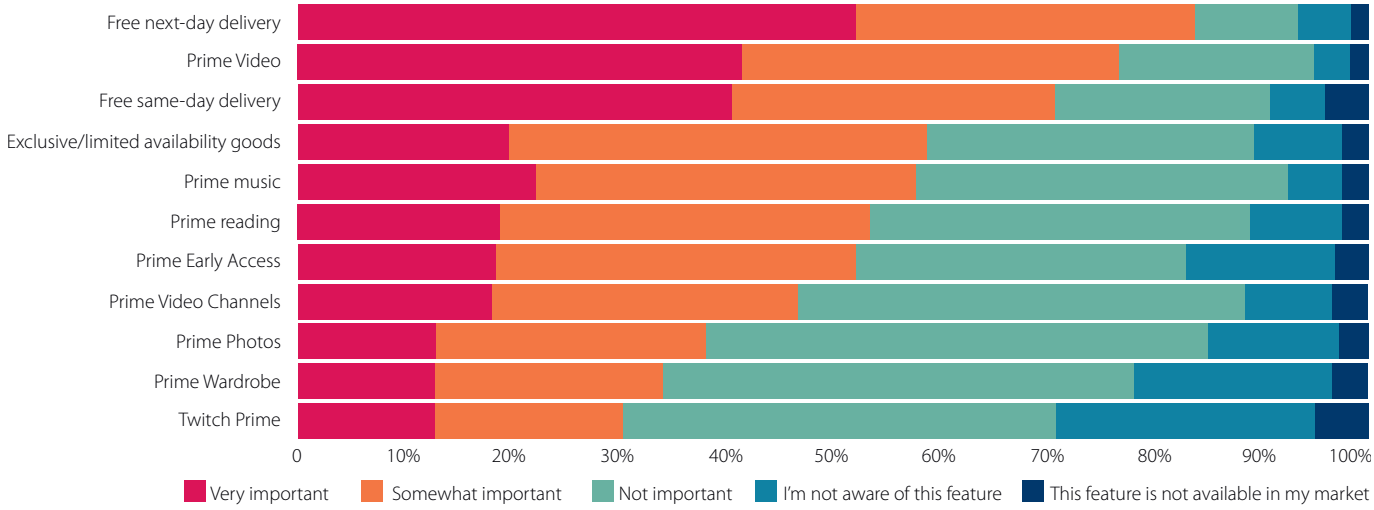
| | Status | Territorial coverage | Ovum 2020 sub forecast | Monthly cost | Catalogue size | Strength/differentiations |
|---|---|---|---|---|---|---|
| **Disney+** | US, CA, Nov19 launch | Global rollout planned | 10 million | • $6.99 standalone<br>• $12.99 bundled with Hulu and ESPN+ | • ca. 7,000 TV episodes<br>• ca. 4,000 movies | • Disney content, global appeal<br>• Bundled with ESPN+ and Hulu in US<br>• Operation streaming exercise<br>• Physical consumer touchpoints (i.e. parks, Disney stores) |
| **HBO MAX** | Spring 2020 | Global rollout planned | 3.5 million | <$12.99 (expected to be greater than HBO NOW) | Over 10,000 hours | • US audience brand perception<br>• Historically strong TV catalogue (e.g. *Friends*, *Game of Thrones*) |
| **Apple TV+** | Fall 2019 | ca. 100 country rollout planned | <4 million | Unconfirmed | Predominantly Apple originals | • Hardware market leadership un multiple categories<br>• iOS users propensity to spend<br>• Deep integration between app, OS, payments and hardware |
| **Netflix** | Live | < 200 countries live | 168 million | • $12.99 (two streams)<br>• $15.99 (four streams, UHD) | • ca. 1,500 TV series<br>• ca. 4,000 movies | • Netflix originals<br>• Deep operational expertise from long (for a streamer) operating history<br>• Scale in audience, technology infrastructure, production investment and territorial presence |

*Source: Ovum*

# Amazon Prime: one subscription to rule them all?

Rob Gallagher, director, media and entertainment research and analysis at Ovum, reflects on the role of video within Amazon Prime and how it affects Amazon's wider business model

**How important are the following features of your Amazon Prime subscription to you?**




*Source: Ovum's Digital Consumer Insights 2019*

In 2016, Amazon CEO Jeff Bezos said of the company's Prime service: "We get to monetise [video] in a very unusual way. When we win a Golden Globe, it helps us sell more shoes." In the coming years, the strategy will go well beyond simple shopping to transforming TV.

To explain Bezos' quip: Amazon Prime launched in 2005 with the promise of free shipping for a flat subscription fee, adding all-you-can-eat access to thousands of movies and TV shows a year later. The logic? Video would attract more subscribers and subscribers would shop more on Amazon.

Ovum's latest Digital Consumer Insights survey sheds light on the current and future success of the strategy:

• **Two out of five US and UK households subscribe to Prime**. In the US and UK, 48% and 41% of 16-plus internet users said they have access to Prime, respectively, equal to around 40% of households in each country.

• **Commerce is king for Prime customers – but only just:** 77% of US and UK Prime subscribers rated Prime Video as "very important" (42%) or "somewhat important" (35%) – second only to free next-day delivery (84%), and ahead of same-day delivery (71%).

• **Video still has the potential to win over Prime holdouts.** A third (31%) of non-subscribers identified "I use other streaming video services" as why they hadn't signed up, ahead of various commerce-related reasons. This suggests that more appealing exclusive TV shows and movies could change their minds.

• **Content will be key to cracking new markets.** Video was the service most respondents in both Prime and non-Prime countries said they would like to see in a subscription bundle of content and commerce (67%), ahead of free deliveries and returns (53%). The success of Prime will provide a platform for Amazon to play multiple roles in tomorrow's TV and video market:

• **One of the "subscription-video six."** Just six companies will serve over half of the one billion online video subscriptions in use in 2023, according to Ovum's forecasts. The power of Prime will ensure Amazon will be in second place with nearly 130 million active video subscribers, behind Netflix, but ahead of Disney, Apple, AT&T, and Google.

• **A key moderniser of TV advertising.** Amazon's new movie service, IMDB TV, will likely prove its least significant foray into ad-funded video. More important will be moves to build a digital advertising ecosystem that harnesses the company's considerable premium video, smart-TV device, commerce, and AI assets to challenge Google and Facebook, including in video advertising, worth US$88 billion (€79.5 billion) in 2023.

• **An iTunes killer – and Apple TV inhibitor.** Apple's digital rental and download-to-own service had more than one assassin, not least Netflix. But with US$11.9 billion (€10.8 billion) in revenue in 2023, the transactional video on demand (TVOD) market will remain large and growing, and Amazon will keep chipping away at Apple's share, even under its new incarnation as Apple TV.

• **A leading TV and video "super-aggregator."** Tim Cook claims Apple TV's interface is "unmatched," but Amazon was the first to bring together all kinds of online TV and video with Fire TV. The spread of Fire to smart TV sets – most people's preferred device for watching premium video – will strengthen the platform's appeal as one of the handful of places future viewers will go to discover and watch TV.

Amazon's growing power comes as 'big media' – Disney, WarnerMedia, Comcast, and Viacom – prepares to fight back against 'big tech', Netflix in particular. But the retail giant seems less an enemy than a 'frenemy', offering media companies multiple ways to reach consumers and monetise content, from re-selling app subscriptions to TVOD to advertising. And it will always have a play even its largest rival companies would struggle to disrupt: free shipping.

*For more information on Ovum research, contact marketingdepartment@ovum.com.*

# **5G video:** the journey begins

**5G rollouts are underway, but it is still not clear which applications will drive consumer take-up. Video is likely to play a major part, but operators need space to experiment, as Thierry Fautier, VP of video strategy at Harmonic, explains.**

5G is coming. Operators are now launching services in key cites and plans are afoot to expand coverage dramatically over the next few years. But questions over how much demand there is for the great leap forward 5G will bring in terms of bandwidth, and how much consumers will be willing to pay for the ultra-fast connectivity that the technology promises, remain unanswered.

Step forward video. Streaming video is one application that seems, on the face of it, to be made for 5G – costs notwithstanding – thanks to the technology's ability to deliver a massive increase in bandwidth and extreme low-latency.

The leap forward in bandwidth that 5G will bring holds great promise for video. Currently, with 4G networks, many consumers have become accustomed to service providers' practice of zero-rating, which enables them to watch unlimited amounts of video content from their provider without eating into their data allowance. However, high levels of demand for live video sessions means that the quality is often compromised, with streams defaulting to a very low-resolution to avoid buffering and freezing.

"The problem is that when you look at video on a phone that is capable of supporting 4K, the quality can be limited, especially for something like live soccer, where you often can't even see the ball," says Thierry Fautier, VP of video strategy at Harmonic. "This is where we think 5G can play a role."

According to Fautier, 5G can provide sufficient bandwidth to support 4K HD quality video, "but we believe as most of the phones are 1080p capable, we will start with HD first. HD 1080p, even zero rated, is already a big leap versus what we experience today on 4G."

Delivering 100Mbps simultaneously to millions of subscribers, combined with the low latency possible with 5G, could have a transformative impact on video distribution – especially for live streaming. Sports in 4K is today encoded with HEVC at about 25Mbps for reference.

One application that has been widely discussed is live-streaming of sports content from inside a stadium, enabling spectators to see more of the action than is possible from a corner seat behind a pillar, and instant replays of goals and other key moments for everyone else at the ground.

Delivering video to thousands of spectators gathered in a single space has proved challenging until now. Fautier says that eMBMS, or Evolved Multimedia Broacast Multicast Services, which was part of the 4G standard, proved disappointing, in part because it required an expensive base station upgrade as well as specific mobile device functionality.

However, in the case of 5G, the 3GPP release 14 eMBMS will be supported by the network and devices from the start, and the network will be able to deliver the bandwidth to support the service.

The challenge of delivering content to a large number of people gathered in a small area such as a stadium remains considerable. Various solutions are under consideration. One is to restrict replay to the stadium from a local MEC (Mobile Edge Computing) server, which could be more achievable than uploading content to the cloud and making it available from there.

"You can capture a live event and transmit it via eMBMS to people in a stadium. Then you can capture a file for time-shift viewing and let people replay a clip of a few seconds, which can be streamed out of a local MEC server in the stadium in unicast over 5G," says Fautier. MEC is another innovation that 5G brings.

> "People want to have a more immersive experience with sports and an interactive and immersive personalised video would be a good way to promote 5G to consumers on their mobile devices."

Harmonic recently tested in-stadium delivery of sports content with France Télévisions. The trial, which was centred on the delivery of 8K coverage of the French tennis open using a 5G network at 250Mbps, employed unicast delivery only. While France Télévisions and Harmonic used reception via a PC as decoder for the purposes of the trial, the intention was to demonstrate the potential for the delivery of 8K unicast streams to two Sharp 8K smart TVs. IP streams were uplinked to base stations serving showrooms belonging to France Télévisions and network partner Orange respectively. Harmonic also tested the playback of file-based assets to phones over 5G in the Orange showroom.

Multicast distribution could have a much wider application than in-stadium delivery of content in the future of course. Much attention has focused on mobile delivery and in-stadium applications, but eMBMS, as defined in Release 14 of the 3GPP standard, could theoretically hold the potential to ultimately serve as a complement technology for digital-terrestrial broadcast.

While broadcasters have been highly protective of their terrestrial distribution networks, they know that in the long terms more people will want to view content on mobile devices – something that could also generate pressure over the future use of spectrum for broadcasting. This is an approach developed by the EBU in Europe, while in the US, some broadcasters plan to use ATSC 3.0 to transmit to mobile devices.

"In principle, a multicast stream can be transported direct to the mobile device, replacing terrestrial distribution. The technology would be built into your phone and you wouldn't need a SIM card," says Fautier.

"Broadcasters want to be able to offer their content to everyone."

With a 5G phone, consumers should be able just to download an app and start watching their favourite free TV channel in high quality up to UHD, without any scalability issues. Fautier says that there is a strong level of interest in the technology in countries including Germany. "There will be trials, this year and next – there is a strong level of interest, including from the EBU," he says.

Other applications that could drive interest in 5G video in the nearer term include virtual reality and what Fautier describes as immersive personalised 8K streaming services.

First 8K is the only technology that can capture the entire field (whether in tennis, soccer or baseball). "We think there could be interest in this because it is already being done in the broadcast production domain. For sports content, you capture 8K content and via a tiling mechanism, you consume content on your legacy device on a moving window that follows the action and only transmit to the resolution of the device what you watch," says Fautier.

Harmonic and partner Tiledmedia worked on trialling this during the French Open tennis tournament. 8K coverage was encoded into an HEVC mezzanine file by Harmonic and sent to the cloud where Tiledmedia's ClearVR streaming technology created a 'tiled representation' of the clips that was accessed via a Samsung mobile phone. The technology enabled users to choose between a 'zoomed out' view of the action or zoom into get a closer view without any visible loss of detail. Harmonic and Tiledmedia also recently showcased this 'personal 8K streaming' application with Hong Kong telco PCCW at the HKT 5G Tech Carnival.

"People want to have a more immersive experience with sports and an interactive and immersive personalised video would be a good way to promote 5G to consumers on their mobile devices," says Fautier.

## Cloud technology

Despite the successful conclusion of trials, Fautier is keen to emphasise that work on 5G video is still at a relatively early stage. The positive impact of the technology will take some time to be felt as operators build out their networks and experiment with applications that consumers are likely to be attracted to.

For the general public, for example, live mobile broadcast TV, which is attendant on seamless 5G coverage, may have less appeal in the near term compared with easily accessible file-based video-on-demand. Virtual reality is one potential application that could take advantage of 5G, but up until now the appeal of VR has remained limited, except for gaming. Quality of Experience at scale for zero rated services, in-stadium delivery combining live streams with file-based replay clips and personalised streaming 8K video are all potential applications that could capture the public's imagination and give them a real sense that 5G is delivering something new, but no-one really knows for sure what will be the killer video app of 5G in the video space. Nevertheless, it is clear that mobile operators need to come up with compelling applications to sell 5G to the public.

"All this has to be tested. We have to be careful not to recommend one size that fits all. You have to try things before you know what works, and that is why operators are in test mode," says Fautier.

For Fautier, it therefore makes sense for broadcasters and service providers to experiment, and they can do this at relatively little risk by tapping the potential of cloud technology.

"You can do all the processing and origination in the cloud and you can use a CDN or a mobile edge network – MEC node – to distribute the content," he says. "Harmonic can provide an end-to-end solution, with partners, with most of the heavy lifting done in the cloud. What people are asking for is a solution that will enable them to test things on a small scale and a solution that will enable them to deploy on a large scale."

Ultimately, he says, superior bandwidth, married to the ability to deliver more sessions at scale, means that moving from 4G to 5G will be a bigger step change in the mobile experience than the switch from 3G to 4G. In the meantime, service providers need an opportunity to try different things out and see what works.

5G rollouts are in clear sight, but the applications that will drive take up are only just beginning to come into view.


*Harmonic recently tested in-stadium delivery of sports content with France Télévisions at the French Open tennis tournament.*

# Cloud transformation *gathers pace*

**Cloud is attractive to service providers – in theory. But big challenges stand in the way of realising the virtual operator, reports Adrian Pennington**

All elements of the video distribution chain have been enhanced through the evolution of cloud technology, ranging from creative tools that utilise cloud-based applications, through to content encoding, packaging and distribution. Cloud as a technology has matured; cloud networks have become media friendly, Open Source tools are reliable, and the hybrid cloud market is expanding rapidly.

And yet challenges remain. A chief one is cost, where operational expenditure is not as transparent as it might be. The speed of implementation (and associated opportunity cost) remain an issue for some, and the application and business suitability of the native benefits of cloud must be weighed versus on-premises facilities.

Put simply, there is no 'one-size-fits-all' approach to migrating to cloud-native environments and it can be a complex process to navigate.

"We are seeing the effects of cloud-led innovation across the entire media chain, ranging from new developments in contribution and distribution, through to delivering more flexible methods of delivery and enabling more personalised consumption experiences," says Stuart Boorn, VP, product management at MediaKind. "The video distribution chain has also adapted to cloud by updating many standards to align with IT and cloud practices."

That's a widely accepted view with which vendors and operators can concur. Verizon Media's chief product officer for its media platform, Ariff Sidi, says media companies and service providers are "fully embracing digital transformation" in order to stay competitive and meet consumer expectations, and cloud adoption is a big part of this.

## Everything cloud

"Initially, cloud capabilities were used for specific point solutions," Sidi says. "But, as cloud capabilities have expanded, what can be done has grown to encompass multiple use cases, and has made it possible to manage the entire delivery workflow end-to-end, providing nearly everything providers need to engage with new customers and grow revenue."

Ralf Hülsmann, head of partner ecosystems of Deutsche Telekom subsidiary T-Systems' public cloud unit believes that "all elements of the production chain today" can be served directly from the cloud.

"Solutions are available for each step, from virtual mixer to postproduction to playout. It depends, however, on the technology maturity, processes and collaboration methods used by the individual company."

Migration also depends on application, some of which are more naturally suited to cloud usage than others. "Live video with high concurrency viewership requires the ability to scale resources flexibly and quickly, making this a great application of cloud infrastructure," says Sidi. "However, encoding of VOD assets tend to be less time- and scale-critical and therefore this application could be a good candidate for on-premises infrastructure."

Ease of scaling resources, for example, for a major sporting event like the Super Bowl, is a powerful characteristic of cloud infrastructure and one of the most frequently used ways for providers to improve the reliability and quality of their distribution.

"Delivering new services at internet speed remains the challenge that traditional operators must overcome to compete with SVOD services," says Boorn. "Cloud technology enables users to scale up or down a line-up of channels or services in a matter of seconds, and faster than any conventional hardware-based approach. It makes sense for service providers to virtualise the management of their linear, VOD or live and pop up channels via a cloud platform as it allows them to manage their resources with greater agility. Operating via the cloud enables service providers to rapidly switch interfaces and deliver immersive, high-value content more cost effectively."

As an example, by optimising and scaling video head ends within the cloud, it is possible for broadcasters to unify UHD, HD and SD video processing. This can lower latency and enable content to be delivered across multiple networks.

"Delivering live streams to multiple devices and platforms and in regions with different bandwidth constraints and no one codec is appropriate for every single scenario," claims Stefan Lederer, CEO and co-founder, Bitmovin.

"Therefore, video developer teams need to have access to a range of the most up-to-date codecs so they can use the more effective one for a particular situation. Whereas traditional hardware can often be using older codecs, cloud-based encoding technologies have the capability to adopt and support new and existing media codecs to ensure that live video and VOD matches, or even surpasses, the quality of linear TV."

Disaster recovery is another effective use of cloud infrastructure, whether that means protection against failures from other cloud zones or regions, or from failures of on-premises infrastructure.

"SaaS is a perfect fit for disaster recovery, as it enables you to deploy disaster recovery very rapidly in order to address unpredictable situations," says Thierry Fautier, VP of video strategy at Harmonic.

A transmission outage such as a cyber attack on France's TV5 Monde in 2015 would have been prevented "easily and cost effectively by cloud technology," says Hülsmann. "Most cloud providers offer high security at low costs."

Hybrid (cloud/on-premises) scenarios for automated metadata generation and long-term archiving are topics of great interest among operators. Other applications include digital ad insertion "thanks to SaaS business models that can scale with the number of sessions, enabling operators to support millions of concurrent subscribers," says Fautier, and pop-up channels used to broadcast major sports events.

"In these scenarios, having a scalable solution is a significant benefit," Fautier says. "A great example is Telkomsel with its MAXStream service ramping up support for four million subscribers in 30 days during the FIFA 2019 World Cup."

> **Live video requires the ability to scale resources flexibly and quickly, making this a great application of cloud infrastructure**
>
> Ariff Sidi, Verizon

For service providers whose offerings are of the more pop-up variety or which change frequently then having the whole workflow in the cloud may well be more economically viable, but perhaps the biggest piece of the transmission chain yet to wholeheartedly embrace the cloud is playout.

"For live video workflows that are active 24/7 and run at a consistent level, it is hard to beat the TCO of a dedicated on-prem data centre," says Nick Fielibert, CTO, Video Networks, Synamedia. "As live TV comes with services like restart, catch-up and cloud DVR it requires a lot of egress bandwidth from the data centre to the subscriber, which may make public cloud costs prohibitive. Ingest in the public cloud is growing in popularity but can sometimes be a challenge for non-compressed video because of the bandwidth requirements. Though cloud servers are increasingly able to handle higher throughputs, getting Gigabits per second of uncompressed data processed without any packet drops is still pushing the boundaries, technically speaking."

## Cloud cost challenges

Distribution is all about caching content as close as possible to the subscriber. "Right now, cloud locations are not always close enough to the broadband aggregation

points, giving private CDNs an advantage over public ones," says Fielibert. "However, some cloud providers are overcoming this by building their own widely distributed CDNs."

Hülsmann also finds moving traditional linear TV to the cloud "cumbersome" for both change and cost reasons. "What is needed in playout scenarios is a broad low-latency network access to the consumer – which we support natively," he adds.

Sidi agrees that ingest to the cloud can be a challenge "when a service provider needs to obtain a high bitrate and high resolution contribution feed from a content provider who may be generating that feed on the other side of the planet." Verizon Media says it deals with this challenge often and so is "quite experienced with it…but it is not a trivial problem."

Additionally, cloud capabilities and the flexibility they provide come with a cost profile that is different than using proprietary on-premises solutions.

"How those cloud costs compound over time compared to the costs of running one's own infrastructure is an analysis that providers should undertake to ensure they get the most benefit from cloud adoption with the most efficient use of capital," says Sidi. "Depending on the use-case, moving infrastructure from on-premises to the cloud may result in migrating costs that may decrease over time to costs that remain flat."

**Cloud-based video processing gives providers the power to orchestrate, manage and monitor their whole infrastructure**

Stefan Lederer, Bitmovin

Reliability and security are not considered an issue for cloud-based services using carrier-grade infrastructure. "Service providers can create resilient video workflows by making use of cloud providers' geo-redundant data centre infrastructure and deployment zone systems," says Fielibert.

Cost can be an issue, though, for public cloud – and may render a pure public cloud deployment uneconomical. Fielibert points to a hybrid model, where service providers blend the flexibility of the cloud with the cost benefits of an on-prem deployment, as a possible cost-effective alternative.

"Disaster recovery is a good example: a service provider can run the media processing backup workflows for a premium channel on-premises for high availability, and have the ability to quickly launch these workflows in the public cloud in case of a disaster."

Fautier concurs that cost is an important factor, but warns that it's dangerous to compare the cost of cloud with a dedicated on-premises appliances.

"On-premises appliances do not offer the same functionality with regards to flexibility, instant scalability and time to market," he argues. "Time to repair is an important metric that is often forgotten. In a classical appliance approach, time to repair is counted in matters of weeks compared with a matter of hours for cloud deployments."

One of the biggest priorities for service providers is making sure that their content remains, particularly for high-value live and VOD content, which according to Lederer has made some media and entertainment brands reluctant to migrate video processing to the cloud.

"Bitmovin has worked around this issue by developing on-premise encoding service that works with both live video and VOD," he explains. "The encoding service can be run locally on hardware whilst still enabling customers to use cloud encoding power, speed and flexibility. Content service providers are already aware that the cloud is more cost-effective and flexible compared to purpose-built hardware, and we have also found a way to ensure security without compromising on power."

## Migration at your pace

There is more than one way to migrate to cloud-based operations and services. As an initial option or trial run, operators and service providers could consider simple systems that reduce the cost and production activities of breakthrough services that entice new subscribers. However, according to Boorn, the media industry needs to build a consensus around all-IP standards and specifications.

"Retaining the 'network effect' of interconnected, best-of-breed devices, will be crucial for the industry and will ensure that it avoids denigrating the quality of experience it has enabled for decades," he insists.

Traditional broadcasters and operators have an enormous amount of legacy technology which makes any refresh an enormous investment. All will be eyeing the best means to bridge the world between these legacy and cloud-enabled environments, believing that this will involve investing more in opex and less in capex over time.

"While many early adopters have moved to the cloud to deliver OTT services, we are now seeing public clouds being increasingly adopted for more workloads," Boorn says. "Protecting access, data and communications requires new skills and knowledge to keep services up to date, especially while using a public cloud, meaning that the correctly skilled personnel are as important as decisions taken over which technology to use."

Phased approaches will minimise risk and maximise learning. "Public cloud works for adding levels of redundancy, where workflows are duplicated on a private

and public cloud," says Fielibert. "Launching new services from the cloud is a good way to test the waters because new services can be spun up quickly and cost effectively. In parallel, the service provider can acquire the resources necessary to move these workflows to the on-premises data centre over time."

It's an approach advocated by Verizon Media and T-Systems, says Hülsmann: "Obviously, it is easy to turn things on and off in the cloud without additional investments while at the same time you keep your applications in a totally isolated environment. In addition, most new software comes in containers – for example, artificial intelligence modules face detection as well as encoding and quality checks. That is perfect for cloud deployments, whereas setting up a technology like Kubernetes on your own premises is somewhat painful. If you move on from proof of concept to pilot project and finally to production, the cloud is a best fit for scalability."

Sidi adds: "When considering whether or not to utilise the cloud, it makes sense to identify small use-cases that can be well-defined and put a plan in place to migrate or build that capability in the cloud," advises Sidi. "This allows the company to limit their exposure while learning how to operate a cloud-first technology stack."

Verizon Media is a heavy user of the cloud, but also maintains significant on-premises capabilities. Sidi says the company has become "very good" at operating technology in both environments, "but we still consider the trade-offs, costs, risks and opportunities each time".

He says: "When investing in on-premises infrastructure, it's important to consider the long-term needs and how that infrastructure may need to grow – or not – over time. Growing the footprint of on-prem infrastructure can become very expensive, maintaining the facilities to house it can also be expensive, maintaining resources to maintain the facilities are yet another cost, as is building the software capabilities that may be available natively on the cloud. However, if these are fixed costs that decrease over time, it may be economically sound to go on-premises. And if physical security is paramount, it may be required.

"Alternatively, cloud technology removes a lot of the overhead of building software systems. It provides a natural path to scale and a slew of capabilities right out of the box that can be utilised quickly. And, as we know, speed is often the priority."

Lederer argues that content providers need to consider the cost effectiveness of investing in on-premises infrastructure that doesn't use the cloud, as it will inevitably be more expensive and not as future proofed.

"Cloud-based video processing provides content service providers with the power to orchestrate, manage and monitor their whole infrastructure all in one place," he says. "On-premises cloud-encoding technologies offer the benefit of a SaaS solution, while running seamlessly on hardware infrastructure. Ultimately, in today's ever-evolving media landscape, the companies that will remain competitive are the ones that invest in technology that is versatile and can be quickly adapted to changing market conditions. We believe that cloud solutions that will be the fundamental differentiator for market leaders, when compared with those companies doggedly sticking to hardware-based encoding technologies."

In summary, service providers will need to weigh up the relative importance of cost, flexibility, future proofing and reliability when making a decision. Generally speaking, pure live and derived services like time-shifted TV that are static in time will have a lower total cost of ownership when deployed in an on-prem data centre, whereas VOD, pop-up channels and disaster recovery may be better suited to the cloud at this stage. ■

## 5G video and the cloud

IHS Markit research is predicting that the 5G era is set to drive the next wave of growth in video streaming, with the deployment of 5G causing video usage to grow to account for 70% of mobile network traffic in 2022, up from 47% in 2015.

This shift to mobile streaming presents huge opportunities on a global scale, but the competition is fierce with new players entering the market to offer content direct to consumers who won't tolerate buffering or lag.

"5G is just being rolled out, however, the video services experimented on 5G are also new," says Thierry Fautier, VP of video strategy at Harmonic. "We are talking about streaming higher resolution video, i.e., 8K, to mobile devices. This was recently demonstrated by Harmonic and its partners at the 2019 French Tennis Open using classical streaming as well as tiling technology to address legacy devices. These state-of-the-art services offer fans a multi-view of live sports, which fits well with 5G as it offers much more bandwidth than in the case of 4G. Many of the applications for 5G will be related to sports events. Other use cases will be more experimental; therefore, cloud is the best fit to support those new applications."

One of the reasons the traditional platforms have survived is because they just work – the content is available, instantly, at the press of a button. That isn't always the case with streaming. It doesn't matter how visually engaging the user interface is or how many features it offers, the biggest impact on user experience (positive or negative) is the reliability and immediacy of content delivery.

In terms of reliability, high bandwidth fibre is increasingly available at venues and more content is being uploaded over 4G and 5G networks. Distribution over IP or direct to consumer via a cloud platform ensures content reaches audiences quickly on their chosen devices.

"With the advent of 5G networks and the growth in mobile video globally, an increasing number of contribution networks are becoming cloud uplinks, while the burgeoning popularity of IPTV services are cloud downlinks," says Stuart Boorn, VP, product management, MediaKind . "Cloud based platforms offer the perfect opportunity to test new product areas."

NPAW
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# Q&A: Ferran G. Vilaró, NPAW

Ferran G. Vilaró, co-founder and CEO of NPAW, who also co-founded Wuaki.tv, talks about the importance of QoE monitoring and data analytics for streaming services

***What impact is growing interest in AVOD having on content provider requirements for video monitoring and analytics?***

Ad-funded services have been driving their business blindly. While making efforts to attract ad spend, they knew that viewers would abandon a low-quality streaming session, poor quality ads or disproportionate ad-volume in a heartbeat since they lack a monetary attachment to the service. There is no entry barrier, but it is equally easy to leave. This adds an extra layer of risk to the provider if they don't tackle ad strategy and quality of experience. A wrongly managed QoE and ad strategy could even defeat a compelling and expensive content offering.

In a recent survey from DTVE and NPAW, 67.7% of respondents said that striking the right balance in terms of the number of ads played is very important for the success of an AVOD service and 50.5% think the same in terms of ad position. For AVOD platforms to grow, it is imperative to keep an eye on these numbers and use data to offer a better service.

AVOD services are thirsty for data to understand audience engagement and adjust their strategy to maximize monetisation: How many ads should you place? Is ad consumption aligned with current inventory? What's the optimal position and length? How are streaming problems with ads affecting overall content consumption?

***What are the key challenges operators face in managing the wealth of data available to them?***

In a recent conversation with an NPAW client, a leading PPV streaming service in Denmark, the CTO explained they would take an "outside-in approach" meaning that they would improve their service not by looking at how well servers were performing, but based on end-viewers' experience and the final product. A company with this mindset uses data at its fullest.

Introducing data to different teams as part of their decision-making process is the next natural step. And it is crucial to drive growth. Most video streaming services think of QoE data as something mostly relevant to their tech teams (81% according to the DTVE-NPAW survey). However, C-level, marketing and business teams can use data to serve their goals too. C-level executives can track overall service performance, user engagement and business health with accurate insights from the end-point. Marketing teams can orchestrate customer retention plans by identifying heavy users, which devices are popular, what is the best day to promote content, how tolerant people are to errors, who is at risk of churn and more. A data-driven company will naturally build a holistic strategy across departments.

***How is user behaviour changing? What does it mean to streaming services?***

A new generation of users is not afraid of trying new services. Nomadic lifestyles – both digitally and geographically – demand that vendors adapt quickly to user preferences while delivering the highest quality. Winning video platforms listen to their viewers through data. Analytics solutions must also evolve quickly.

We all expect delightful media experiences. Data can help video services manage user journey touchpoints to build 'stickiness' – free trials, effective promotion, pricing plans to counteract account sharing, hybrid business models etc. If quality of experience levels are fine but users are abandoning videos halfway through, you may want to look at your content offering. If your viewers click on recommended content but don't end up watching, you may want to review content discovery. Users logging in but not consuming could be telling you something about your user experience. Maybe users are sharing accounts and you need to revisit pricing. There are hundreds of questions business teams can answer with data.

***What do video services need to optimize the use of data?***

Real time QoE analytics is the first step to drive performance. However, content providers need further insights on quality, audience, content and ads, correlated across the entire session, to stay competitive in the long run. In-depth insights will enable personalisation and constantly evolving services.

Turning data into actionable insights and its immediate availability of data to relevant agents can make a difference. Analytics solutions offer ways to leverage the power of data with advanced visualisation, smart and granular error detection and diagnosis systems, flexible data extraction for external reporting and data warehousing. Those solutions must be able to correlate data across the entire video session, to enable immediate action and connect various sources within the customer organisation. This will help streaming drive revenue growth.

***What do video service providers need to prioritise to make the best use of user behaviour and platform performance data?***

Use the data to create long-lasting relationships with your audience that take on your competitors' moves to snatch your users. Top streaming services think of building delightful media experiences as opposed to a one-time transaction or troubleshooting a single problem. And use data to constantly evolve. Show users you care about them.

# Show preview: IBC 2019


## Amsterdam calling

Ahead of the biggest event in the European broadcast industry calendar, Digital TV Europe takes a look at some of this year's key trends and conference highlights.

It really goes without introduction. Even those with only a vague knowledge of the TV industry are likely to aware that September is the month of IBC.

Now entering its 53rd year, IBC's claim to be "the world's most influential media, entertainment and technology show" has never been more relevant. Over five days, it is expected that over 55,000 attendees from more than 150 countries will descend upon the RAI Amsterdam Convention Centre to get a peek at the industry's latest innovations from 1,700 exhibitors across 15 halls.

The organisers say that the theme of this year's show is encouraging the industry to 'See it Differently', with the rising number of OTT platforms and continued growth of UHD content rapidly revolutionising the ways that we consume content.

On the show floor, attendees can expect to see this trend continue, with game-changing technologies for DTT, satellite and cable, along with the advancement of OTT and streaming technologies.

Outside of the exhibition, the conference will present five new tracks, each having a different focus daily with insight from over 300 speakers from around the world. Talks will be based around the themes of: creating disruption; automating media supply chains; embracing the 'platform revolution'; engaging consumer experiences; and scaling audiences and revenues.

Making a return for this year's show is the Big Screen, a programme taking a look at how technological developments are enabling the industry to be more ambitious than ever before. Top industry personnel, such as visual effects icon Andy Serkis of *Lord of the Rings* and *King Kong* fame, and BAFTA award-winning *Slumdog Millionaire* editor Chris Dickens will talk about how modern technology enables them to realise their artistic visions on the screen.

The 'See it Differently' motif also carries through to the conference schedule. Diversity has long been an issue for the industry, and IBC 2019 is looking to re-address this balance with featured speakers from YouTube, Sky, Vice, and Refinery29. There will also be 'Lounge Talks' on sustainability, gender balance and LGBT representation in the media and technology industries. These include talks on the subject of Neurodiversity in the media and tech industries and LGBT networking sessions.

Visitors will also be able to see first-hand the innovations that have come about through the Media-Telecom Catalyst Programme that was launched at the previous year's show. The scheme was set up as a collaboration between IBC and TM Forum (the telecom operator trade association).

The last new feature of the show is the introduction of the IBC Esports Showcase, aimed at demonstrating and discussing the media broadcasting opportunities present in the fledgling market.

# Key exhibition themes

## Content Everywhere

Taking place on the eve of three huge OTT platform launches – Disney+, Apple TV+ and HBO Max – streaming is going to be more central to presentations, demonstrations and discussions than ever before. Central to this will be the 150-plus exhibitiors in hall 14, the Content Everwhere hub. From Friday to Tuesday, free sessions will be held in the hall to help attendees get a better idea of the business models and technologies behind online video consumption. Showcased will be everything from digital transformation and monetisation to content security, AI, apps and IP production.

## Future gazing

One of the most exciting parts of IBC is seeing upcoming tech and 2019 is no different with the Future Zone in hall 8 a must-visit for attendees. Chief among these will be the technology fuelling the growth of UHD HDR and 8K, with Japan's NHK introducing the world's first 8K satellite broadcasting system ahead of its deployment at the 2019 Rugby World Cup. Multiple vendors will also give a glimpse into a potential viewing future with glasses-free mobile 3D TV along with augmented reality. The hall will also see a series of presentations on the business trends that will impact and be impacted by tech.

## Esports

Esports takes centre stage for the first time at the event as IBC introduces its first Esports Showcase. Taking place on September 17, the one-day feature event will see a morning of keynote sessions, interviews and panel discussions followed by a live esports demonstration of two professional *Counter Strike: Global Offensive* teams going head-to-head. The showcase will feature speakers from the likes of Twitch, Blizzard, ProSiebenSat.1 Sports, Ginx Esports TV, IHSE and ESL who will discuss the challenges and opportunities that are emerging in the fast-growing and exciting sector.

# Key conference talks

## IBC 2019 opening keynote

**Where:** The Forum
**When:** 09:45; September 13
**Who:** Cécile Frot-Coutaz, head of EMEA, YouTube

The ex-Fremantle CEO and current YouTube EMEA chief will build upon the conference's 'See it Differently' theme by telling the story of a generation of "born digital" self-made stars for whom broadcasting fame is no longer the goal, with web success the pinnacle of achievement.

## Global Gamechanger: Gary Shapiro

**Where:** The Forum
**When:** 12:15; September 13
**Who:** Gary Shapiro, president & CEO, Consumer Technology Association

Shapiro, the CEO of CES organiser CTA, will talk about how it is more important than ever for broadcast and media companies to respond to consumer technology trends in granular detail along with the innovations and policies emerging from the CTA.

## Transforming user experiences with voice

**Where:** The Forum
**When:** 15:00; September 16
**Who:** Max Amordeluso, EU Lead Evangelist, Amazon Alexa

While they might have started as a gimmick, voice assistants now play a pivotal role in many homes. During his talk, Amordeluso explains how to find the right use cases and revenue models for voice, and how developers and device makers are using the Alexa to transform the user experience.

# Other forthcoming events

## Broadband World Forum

**RAI Amsterdam**
**October 15-17**

BBWF is the only global operator-led event for the networks industry. The programme will explore the industry excitement surrounding 5G, edge computing, network slicing, open source, IoT and blockchain, and will provide a realistic perspective on how these technologies are currently being deployed along with how they are evolving and being monetised.

## Sportel Monaco 2019

**Monte Carlo, Monaco**
**October 21-24**

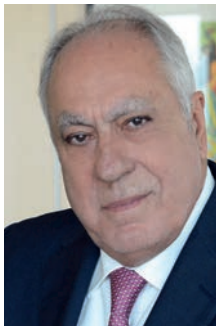
Sportel Monaco boasts of being the world's only exhibition and trade show for the international sports media and technology industry. The event is geared up for companies that have commercial interest in the global sports business industry. The 2018 event saw over 3,000 atendees from more than 950 companies, with 42% of the attendees being C-level executives.

## Video Exchange MENA

**The Address, Dubai Marina, Dubai**
**October 22-23**

Video Exchange MENA looks at the evolution of traditional business models in an age of transforming consumer behaviour. During the two-day event, partners will have access to insights from, and networking opportunities with, C-level practitioners from the leading players amongst telecom operators, broadcasters, OTT TV service providers and content owners.

FINCONS GROUP




# Q&A: Michele and Francesco Moretti, Fincons Group

Michele Moretti, CEO of Fincons Group, and Francesco Moretti, Deputy CEO Fincons Group and CEO Fincons.US, talk about the evolving requirements of the broadcast industry at a time of accelerating change.

***Based on your 36 years' experience, in Europe and more recently in US, what changes have you witnessed in the broadcast industry over the period?***

**Michele Moretti:** Until about a decade ago the pace of change in technology was much slower and the market was quite traditional. Now, however, technology is driving change. A decade ago, Europe witnessed the entry of big players with big content accessible to anyone, so broadcasters had to transform to compete. The effects of this market shake-up continue to trigger new strategies and innovation with the convergence between broadcast and broadband technology even leading to the development of new standards such as HbbTV in Europe and ATSC 3.0 in the US. Talking about HbbTV, we have developed significant skills in Europe working on high-profile projects with top broadcasters, and then we have exported all this experience to the US, where we recently opened two locations, helping the market adapt to the ATSC 3.0 standard and build its own unique vision.

**Francesco Moretti:** Digitisation has certainly been the most disruptive change over the last decade, with European broadcasters trying to defend themselves from OTT natives such as Netflix by developing their own OTT service complementary to their traditional offering. There has been acceleration in the past two years towards more viewer personalisation based on preference and interaction to produce better editorial and to fuel addressable and targeted advertising models.

***What do you see as the key challenges facing broadcasters today?***

**Francesco Moretti:** Broadcasters today need to find a way to ensure that they extract the intrinsic value of their content.

One key strategy to achieve this is alliances: broadcasters typically invest in content for their local market which in turn has access to global content. Alliances, such as subscription video-on-demand joint ventures, Salto and Españolflix™, Loves TV ES, Pro7-Discovery DE or Freeview UK as well as the partnerships between Mediaset-Pro7, RTL-Pro7 and Media4Europe are a way of breaking down borders and producing more international content.

***What is Fincons' role in this changing landscape and how has the company had to adapt and evolve to respond to market demand?***

**Michele Moretti:** We have a clear vision of the future of television from long-lasting and successful collaborations with Tier 1 companies globally. These experiences have provided us with deep industry knowledge that we leverage to bring innovative solutions to the market and to help our clients. Some of our pioneering efforts in various areas of media tech have been in partnership with universities and supported by EU Commission funding for cutting edge research, alongside our own strategic R&D investment and future scoping.

Our internationalisation strategy also plays a key role providing our clients with the most cutting-edge solutions, as we have been exporting the experience and skills acquired in Europe to the US and vice versa.

***What role do partnerships play in your way of doing business and developing technology?***

**Francesco Moretti:** We have selected partnerships that enable us to make targeted and tailored best-of-breed technology suggestions that respond to the client's specific requirements.

To cite a few successful examples, this is the process we applied working with our partner Comcast Technology Solutions on clients such as RTÉ and Mediaset, or with Operative and Mediamorph on brand and rights management. From a User Experience and front-end technology standpoint, we have partnered with 24i and You.i, while Irdeto and Nagra are valuable partners in delivering content protection solutions to integrate into our systems. Obviously, we also directly develop tailored systems for clients based on our own ad hoc solutions wherever this is required.

***What strategies will you be focusing on to continue to support the media industry in the future?***

**Michele Moretti:** We plan to continue to provide our global clients with our deep and ever-growing knowledge of the sector based on expertise acquired directly in the field. To achieve this, we remain committed to growing internationally. The media sector is an industry that we know well. Our experience has helped to position and differentiate us in markets as competitive as the US.

In addition to this, we are continuing to expand in Europe thanks to our media capabilities and we have just opened a new office in Munich in Germany. This new opening comes on the back of several years of experience in the German market, based on the long and fruitful relationship with leading media companies such as Sky Deutschland and the more recent partnership with BurdaForward, a leading German digital publishing company that selected us on the basis of our experience in media and publishing and for our Southern Italy-based Smart Shore Delivery Centre, which has facilitated the establishment of BurdaForward's own product and development site in Bari, providing an incubator environment for this strategic operation.

# A life in TV

With all the excitement around streaming, it's easy to forget that millions still rely on DTT. *Digital TV Europe* spoke with Jonathan Thompson, CEO of Freeview platform operator Digital UK, to discuss his career so far and how Freeview is evolving in the OTT age.

**What does Digital UK do and why is it important?**
Digital UK is responsible for the operation and development of the UK's largest TV platform: Freeview. We do this alongside Digital TV Services, the company responsible for the brand and its marketing. But the Freeview platform runs on the principle of partnership – between broadcasters, TV manufacturers, retailers and many other parties – and we see our role as helping to ensure this partnership works seamlessly for the viewer. It is important because everyone in this country has the right to great TV, for free. This principle lies at the heart of our broadcasting system and we're focused on securing it for the future.

**How would you describe your role in the organisation?**
As CEO, I see my role not as 'to do', but to help guide and support the great team of people that work in Digital UK and Freeview.

**What has been your career path to get you to this position?**
I've been very lucky. After starting my career as an accountant, I got a job at a Hydra, a small but influential media consultancy. This led to me moving to Channel 4 for 10 years in what at the time was my dream job heading up its strategy team. After this I moved to Ofcom, a brief period at DMGT and then six years in this role.

**What does an average day look like for you?**
I don't believe a good day is one spent in back-to-back meetings. I like to have time to chat to people internally, read and think, and to spend time with our shareholders, partners and other friends in the industry from whom I can learn.

**What trends are you seeing in the industry?**
Three very simple trends with profound implications. First, TV has always been an industry led by national players and now it is becoming dominated by global players. Second, TV has always been about controlling the means of distribution, but OTT is about who controls discovery of content. And third, many of the new entrants into the TV sector are seeing it as a loss-leader for other income streams which means their investment appetite is very different to the incumbents.

**How should Freeview evolve in the OTT age?**
Freeview has always been a 'fast follower' – embracing innovations, making them simple and easy to use for the mass market. Freeview Play and the Freeview mobile app are based on the principles of making watching TV over the internet as simple, easy and natural as possible for the mass market.

**What developments are you most looking forward to in the next 12 months?**
Voice control in TV. It's still early days and it will be fascinating to see how it evolves, how and if viewers embrace it, and who the winners and losers will be.

**Is over-the-air UHD and HDR something Freeview is working on?**
UHD and HDR are already available on Freeview Play TVs. We've had successful trials of UHD programming from the BBC including the World Cup and Wimbledon.

**How different do you think the industry will look in 10 years?**
At the end of the day, people will still be sitting together watching long-form programmes on a screen in the corner of the room, in their millions together at the same time. So, in some ways, TV won't look that different. But the real change will be in the range of TV services available, where and how content is funded and distributed, and how programming is discovered by viewers – and who controls this. The UK television sector is something to be cherished. My hope is that through a strong response from UK broadcasters and ongoing support from policy makers and regulators, we can have a TV sector in this country offering the best of great British TV programmes and the best of programming from the new players around the world. ■

11th Annual

# Video Exchange Streaming

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**Melanie Moeller**
Senior Product Lead and Senior Research Engineer (IoT & AI) - Emerging Products
**Sky**

**Matt Stagg**
Director of Mobile Strategy at BT Sport, Head of Media & Entertainment Technology
**BT Sport**

**Damian Pellicone**
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# Tech in focus

News and analysis of the technology behind digital video.

## Vionlabs turns to AI to cut down search time

**Stockholm-based Vionlabs has announced the launch of its AI-powered content discovery platform.**

The new platform promises that it will enable operators to cut down the amount of time users spend looking for content and reduce churn.

Marcus Bergström, CEO, Vionlabs said: "Viewers are spending 25% or more of screen-time looking for something to watch. Solving this issue is our major focus at Vionlabs and early customer engagement has shown that our AI-powered content analysis approach delivers game-changing results."

The company argues that a primary reason behind poor performance from other discovery methods is because they rely on external metadata for video assets. Most metadata, Vionlabs believes, is "simply not nuanced enough" to provide a solid foundation for content discovery.

"Our solution is based on deep thinking from our engineers and their key realisation that we could train AI engines to learn what variables should be measured in the video and audio and combine this with viewers' watch history to significantly out-perform existing content discovery solutions," continued Bergström. "Our platform is now providing live content discovery that improves critical operator metrics such as VOD buy-rates and customer engagement."

The platform works by measuring the video assets in an operator's catalogue and then training its AI engines to "work out what matters" in each asset.

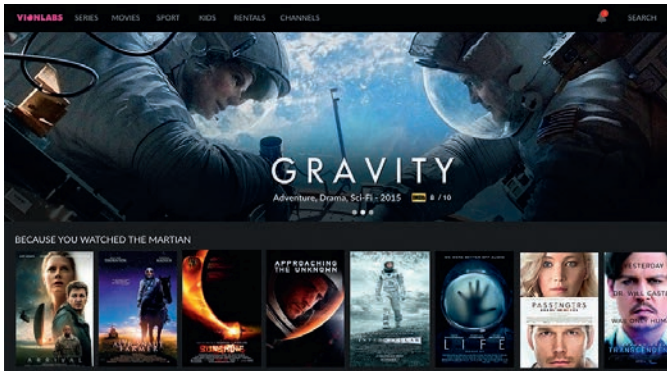
It achieves this by using AI and deep learning, and combines this video analysis with a viewer's detailed watch history to provide industry leading content discovery services to operators through a cloud-based SaaS model.

Vionlabs has trained multiple AI engines to measure everything in the video, including object recognition using computer vision as well as colours, pace, audio, and many more variables to produce a fingerprint timeline throughout the content.

From there, a unique 'fingerprint' timeline is generated which creates a fuller idea of what the content is and how it can relate to other shows and movies in the operator's library.

These results are produced through a cloud-based SaaS model integrated with the operator's back office systems.

"During the year we have productised our technology and deployed our content discovery platform for operators that are now enjoying a significant uplift in VOD buy-rates and engagement," said Giles Wilson,




chief technology officer, Vionlabs. "By serving up the right content at the right time, our content discovery platform maximises the time viewers spend watching the content they love and minimises the time they spend searching for it. This leads to happier viewers that spend more time and money on a video platform."

## In brief...

**Red Bee Media signs deal with RTL for MCR services**

Media services company Red Bee Media has announced that it will be providing its services to Dutch broadcaster RTL's IP Global MCR Platform. All of RTL's facilities will be connected to the Red Bee Media MCR in Hilversum, with access to a global video network. The transfer, which started in July, will see all MCR assets migrated from RTL's infrastructure, to be managed through Red Bee Media's end-to-end video services offering. The deal will see all live signal acquisition, video routing, processing, monitoring, reporting and distribution required by RTL outsourced to Red Bee Media.

**Amazon launches VR video app**

Amazon has launched its first dedicated Prime Video VR app. Prime Video VR is available for Oculus Quest, Go, Rift and Gear VR devices, and comes at no extra cost for Amazon Prime subscribers in the UK and US. The full library of Prime Video content, including titles such as *The Marvelous Mrs. Maisel*, *Good Omens* and *Tom Clancy's Jack Ryan*, is available to watch in a virtual cinema, along with a range of 360-degree videos for VR.

# Edgeware launches StreamPliot session control platform

**Swedish CDN tech vendor Edgeware has launched its new session control platform.**


StreamPilot is designed to give broadcasters, content and service providers real-time, in-session and per segment delivery control when streaming media in a multi-CDN environment.

The SaaS-based StreamPilot uses a new patent pending technology to control every session with per-segment granularity between the client and the delivering CDN.

In practical terms, StreamPilot works by actively monitoring the CDN session in real time and, in the event of any issues, such as server crashes, switching to another server through an automated process.

The platform is also client-agnostic and supports all media formats, including DASH (for Android clients) and HLS (for Apple clients), regardless if it is live or on-demand.

StreamPilot does not require an Edgeware CDN system or depend on any other delivery CDN.

A key user feature of the platform is its 'all-seeing' dashboard, which is made up of an open API to enable automation and integration. This dashboard gives single-pane view of important CDN performance indicators such as load, performance and cost, as well as end user experience.

Karl Thedéen, CEO of Edgeware said: "We are extremely excited to present a solution that ensures quality and control for multi-CDN environments StreamPilot is the industry's first session control platform to provide this functionality independent of client, CDN and any other component in the media delivery chain. Furthermore, our customers can instantaneously benefit from StreamPilot by connecting to the Edgeware Cloud Service."

Johan Bolin, chief product and technology officer at Edgeware added: "StreamPilot opens up a wide range of possible applications that can utilize the insights gathered from the video sessions. "StreamPilot's unique location, sitting in the control plane between the client and the CDN, makes it possible to test new concepts, measure outcomes and rollback changes in real time. Furthermore, StreamPilot can be used to enforce rights and policies and block illegal distribution."

StreamPilot is offered as part of the Edgeware Cloud Service which launched in April 2019.

**A1 tests 8K streaming over 5G**
Austrian telco A1 has conducted a test of 8K video streaming via its 5G network at the Alpbach 2019 European Forum. A1 teamed up with technology partners Nokia and Samsung for the project. The telco expanded the mobile Internet infrastructure in the Tyrolean town, upgrading four existing outdoor transmitters with 5G 'Massive MiMo' antennas, and equipping the Forum venue with an indoor transmitter.

**Arris launches Android TV STB**
US equipment vendor Arris and US regional telco and cable operator TDS Telecom have announced plans to deploy an Android TV set-top box (STB) solution for the TDS Cloud TV platform called TDS TV+. The STB marks Arris's first foray into developing an Android TV device for the region.

**All Media Baltics taps Atende for new OTT TV platform**
All Media Baltics, the Providence Equity Partners-backed outfit that took control of Modern Times Group's assets in the Baltic states in 2017, is to launch an OTT TV offering and has tapped Atende Software to provide its redGalaxy platform for it. The new service will be available across Estonia, Latvia and Lithuania and will offer a range of local and international sports and entertainment content, including live TV channels, news, premium sports, original movies and series and exclusive access to All Media Baltics flagship TV shows for subscribers to view on smartphones, tablets, web Android set-top-box and smart TVs.

**Globecast and Eutelsat launch new Hotbird platform**
International distribution firm Globecast has announced an extension of its partnership with Eutelsat Communications on the creation of a new Hotbird platform. Globecast says that the new platform is designed to "satisfy the growing move from SD to HD in the market".

**Portuguese watchdog sets out 700MHz migration timetable**
Portuguese digital-terrestrial TV broadcasters will have to vacate the 700MHz band in a process that is set to begin in January and will take place over approximately six months, according to a timetable set by regulator ANACOM. ANACOM, like other European regulators, is clearing spectrum for 5G mobile services.

# Directors team up with TV industry for 'Filmmaker Mode'

**While TVs are better than they've ever been, most of their owners will never get to see them at their best – and this is an issue that has raised the ire of many people in Hollywood.**

A-lister Tom Cruise famously filmed a 'PSA' against the practice of video interpolation – motion smoothing – being turned on by default in modern sets and options to deactivate it being hidden away. In that video, Cruise said that filmmakers were working with TV manufacturers to resolve the conflict, and that leads us to the launch of Filmmaker Mode.

Filmmaker Mode has been launched as a collaboration between the UHD Alliance (UHDA), the Hollywood studios and members of the filmmaking community. While current TV sets use advanced video processing capabilities to offer consumers a broad range of options in viewing various types of content, ranging from sports to video games, these settings often come at the detriment of movies.

Launched at an event at the SAG-AFTRA Foundation in Los Angeles on August 27, industry figures ranging from Panasonic Hollywood Lab VP Ron Martin to *Star Wars: The Last Jedi* director Rian Johnson spoke passionately about the technology, what it has been designed to achieve and its implementation.

In its simplest terms, Filmmaker Mode will disable all post-processing in order to give the purest version of the filmmaker's vision. This means turning off the aforementioned motion smoothing, along with preserving the correct aspect ratios, colours and frame rates.

A pre-recorded reel from a variety of directors added weight to the initiative, including *Black Panther* director Ryan Coogler, *The Phantom Thread* maker Paul Thomas Anderson (*pictured*) and Hollywood icon Martin Scorsese (the latter has long been an advocate for technological progress in filmmaking, including being a strong proponent of 3D with 2011's *Hugo*).

Functionally, Filmmaker Mode will be activated either automatically through metadata on a stream or disc, or via a button on the TV's remote.

"Modern televisions have extraordinary technical capabilities, and it is important that we harness these new technologies to ensure that the home viewer sees our work presented as closely as possible to our original creative intentions," said Christopher Nolan, the director of such acclaimed films as *Dunkirk*, *Interstellar* and the *Dark Knight Trilogy*.

"Through collaboration with TV manufacturers, Filmmaker Mode consolidates input from filmmakers into simple principles for respecting frame rate, aspect ratio, color and contrast and encoding in the actual media so that televisions can read it and can display it appropriately."

So far, three TV makers have thrown their hats into the ring – LG, Panasonic and Vizio. The latter announced that Filmmaker Mode will be available in its 2020 TVs, but plans from the other two have not yet surfaced. It's worth noting that while a Samsung exec does sit on the UHDA board, the Korean company has not made a statement about whether it will adopt the standard.

Amazon too has thrown its weight behind filmmaker mode, with Prime Video global head of digital video playback and delivery BA Winston saying: "Amazon Prime Video is dedicated to delivering the best viewing experience for our customers worldwide, and we are excited about participating in this initiative."

## In brief...

**British Airways to trial VR on flights**

Airline British Airways has announced a trial of VR entertainment on select first class flights from London Heathrow and New York's JFK. Until the end of the year, the company has paired with VR eyewear specialist SkyLights (an alumnus of British Airways' parent company IAG's Hangar 51 start-up scheme) to enjoy a range of films, documentaries and travel programmes in 2D, 3D or 360-degree formats. The company says that the headsets will work regardless of the user's sitting position, including lying fully flat.

**Twitch launches Twitch Studio broadcasting software**

Live streaming platform Twitch has announced the launch of Twitch Studio, its first broadcasting software. While it is the biggest live streaming platform online, Twitch users have historically relied on third party software such as free and open-source cross-platform Open Broadcaster Software (OBS). Such software, while being versatile, has often been difficult to use and setup for inexperienced streamers. Twitch says that the launch of Twitch Studio is in an effort to open up streaming and give new streamers an easier experience of getting started.

**Honor launches first Huawei HarmonyOS smart TV**

Following the announcement of its proprietary HarmonyOS, Huawei has launched the first smart TVs that will run the operating system. Released under its Honor brand, the Honor Vision and Honor Vision Pro went on sale in China on August 15.

**Amos-17 launches**

Israeli satellite operator Spacecom has successfully launched its Amos-17 satellite from Cape Canaveral aboard a SpaceX Falcon-9 launch vehicle. The satellite, which will be placed in the 17° East orbital position, will begin its testing processes in orbit over the next few weeks.

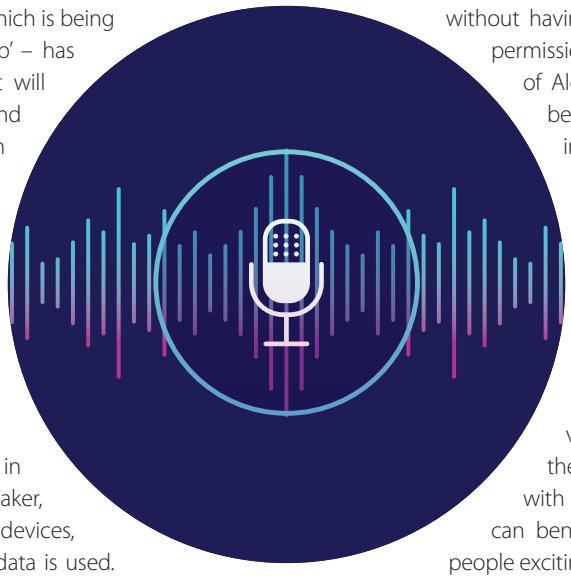
# BBC reveals plan for 'Beeb' voice assistant

**The BBC is developing a voice assistant to rival Amazon's Alexa, the broadcaster has revealed.**

The public service voice assistant – which is being developed with the working title 'Beeb' – has been created by an in-house team. It will launch next year and will understand British regional accents – a common problem for voice assistants.

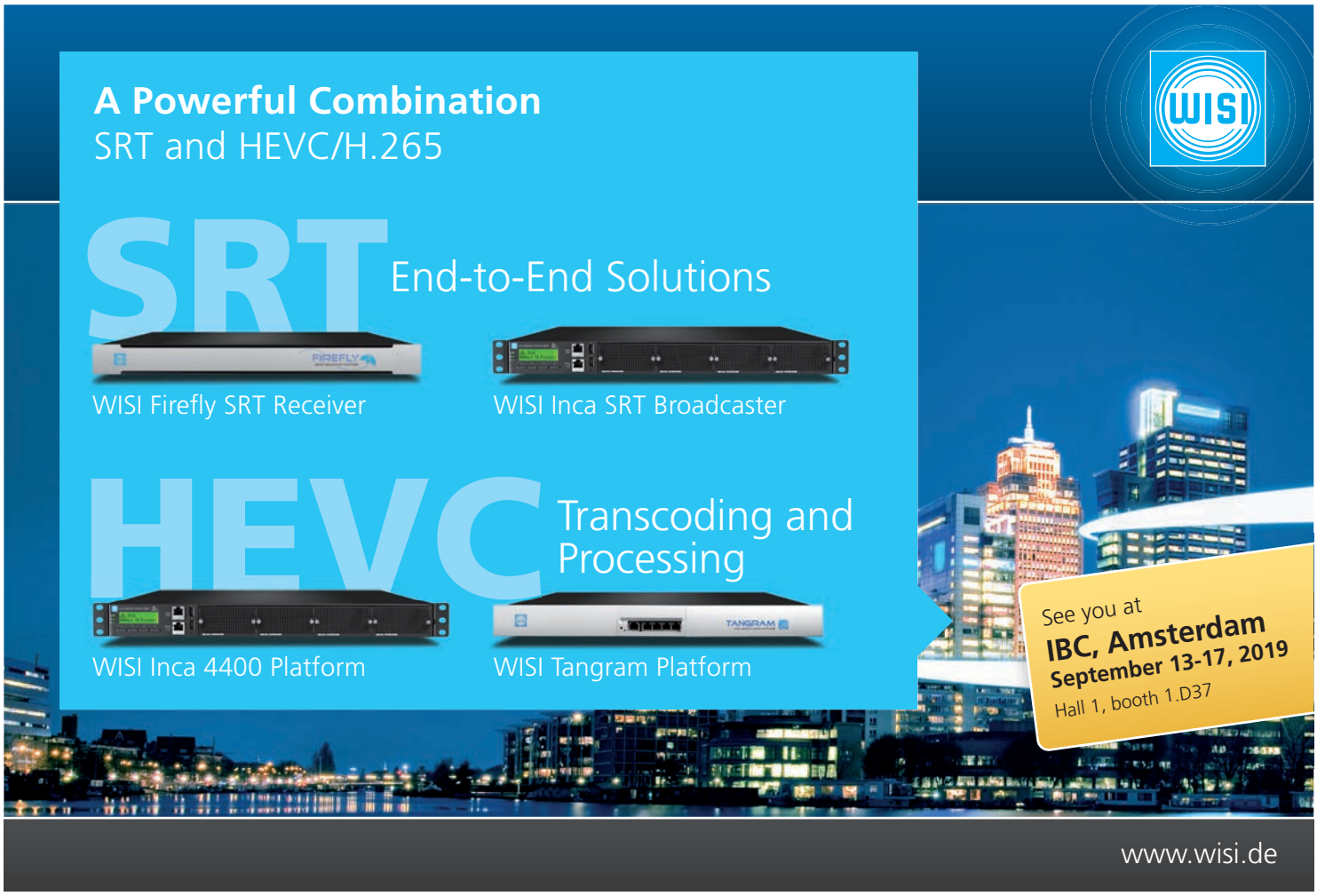
The voice assistant is being built by the team responsible for existing BBC voice experiences including CBeebies bedtime stories and interactive games to technically work on any voice-activated device, including smart-speakers, mobiles and TVs, according to the BBC.

According to the pubcaster, while one in five UK adults say they have a smart speaker, as well as voice assistants on personal devices, many are concerned about how their data is used. The BBC's aim in developing its own variant is aimed at allowing wider access to the technology from a trusted source.



The BBC said that developing an assistant of its own would also give it the freedom to experiment with new features and experiences without having to seek another technology company's permission, as is the case in developing for the likes of Alexa and Google Assistant. The corporation believes Beeb will allow it to be more ambitious in delivering the variety of content and features that listeners can enjoy.

Confirming development of the tech, a BBC spokesperson said: "Around one in five adults have a smart speaker in their home – and millions more have voice-activated devices in their pockets – so there is growing demand from people to access programmes and services with their voice. But people are concerned about how these devices use their data. Much like we did with BBC iPlayer, we want to make sure everyone can benefit from this new technology, and bring people exciting new content, programmes and services – in a trusted, easy-to-use way. This marks another step in ensuring public service values can be protected in a voice-enabled future."



# Teleste: distributed access stalled by lack of investment

**The cable industry's migration to distributed access architecture is leading operators to postpone investments in the current generation of network technology, according to Teleste CEO Jukka Rinnevaara.**

The CEO said that the industry is focusing on ensuring interoperability between different parties' systems and that this is is acting as a brake on the deployment of new technology.

Rinnevaara's comments came as the Finnish technology company posted reduced second quarter net sales. The company said that decline had been "expected" due to a strong comparative period last year.

Rinnevaara said that the cable industry was "in the middle of a technological transformation in which the next-generation distributed access architecture will provide the most competitive solution for increasing network capacity" and that operators had "postponed their investments in existing network technology while preparing for the adoption of a distributed access architecture in both Europe and North America".

He said that Teleste's product development in this area had progressed as planned, but that "ensuring interoperability between different parties' systems has turned out to be more demanding than foreseen across the entire industry".

These comments echo comments by SVP of network products Hanno Narjus at the ANGA COM trade fair earlier this year, when he said that although the industry is moving towards distributed access, "there is still some work to be done".

In addition to access products, Teleste's network services business line also saw a revenue decline, with growth in the UK failing to offset declines in Germany and Finland, with the figures for Germany impacted by the completion of a significant project at the end of last year.

The company's video and broadband solutions business saw growth and improved performance in the second quarter, with a strong order backlog.

Teleste posted net sales of €58.2 million for the quarter, down 10.6%, while operating income was down 34.2% to €2.3 million.

# NHK to broadcast Rugby World Cup in 8K in world first

**Japanese broadcaster NHK is offering coverage of the upcoming Rugby World Cup in 8K.**

The tournament, which kicks off on September 20 and emanates from Japan, will be the first time that sport will be produced and broadcast in 8K.

Over the tournament, 28 and 23 camera plans will cover the action, rising to 34 cameras for the semi-finals and final.

Coverage of the tournament will also be offered through multiple feeds in multiple formats, with content also available in 4K.

Augmented Reality graphics will also be incorporated into the coverage of 34 matches for elements such as team line-ups, player comparisons, statistics and tables.

World Rugby chairman Sir Bill Beaumont said: "Our mission is to grow the global rugby family and our Rugby World Cup 2019 broadcast plans reflect that mission – providing more content to more people with more innovation than ever before.

"We are excited that new standards will be set in the broadcast and social media presentation of Rugby World Cup, as fans will experience the action from more angles and feel even closer to the world's top players and the stories that will mark an historic and very special event."

# In brief...

**WWE walks away from Disney tech for Network refresh**

Wrestling giant WWE has shifted away from Disney's BAMTech for its refreshed WWE Network SVOD. WWE said that the switch to Endeavour Streaming tech will allow the company more flexibility, including the ability to offer different pricing tears and improved multi-language support. WWE has also upgraded stream quality from 720p to 1080p, and now runs on HTML5 rather than Flash.

**YouSee partners with Media Distillery for VOD**

Danish telco TDC's YouSee cable division has tapped artificial intelligence specialist Media Distillery to help it provide an improved video-on-demand experience. Media Distillery provides an AI-based way of accurately identifying the true start times of TV programmes in order to facilitate catch-up and on-demand programming. Using real-time analysis across multiple channels, EPG Correction from Media Distillery provides automatic adjustments to update the actual start and end time of television programmes as they are Together with YouSee, Media Distillery, will also identify the true end times of programmes, enabling a complete and smarter programme guide for the subscribers of the Danish service provider.

**Vodafone launches OTT Vodafone TV in New Zealand**

Vodafone NZ has announced the launch of a new OTT set top box. The plug and play Vodafone TV, which goes on sale in September for NZ$179 (€106), will be pre-loaded with a range of apps including TVNZOnDemand, ThreeNow, Sky, Sky Sport, Netflix and YouTube. The company promises that soon after launch this will be expanded to include NEON, Lightbox, Amazon Prime Video and PlayStuff. The device can be purchased by non-Vodafone customers and users will manage subscriptions through the Vodafone TV portal using their credit card.

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# Commscope cuts McClelland after US$7bn Arris acquisition

**CommScope has eliminated ex-Arris chief executive Bruce McClelland's COO role within the company and passed his responsibilities on to CommScope CEO Eddie Edwards and other members of its management team.**

The decision to let McClelland go comes only four months after CommScope acquired Arris for US$7.4 billion (€6.7 billion).

In a short statement, CommScope said that it had eliminated the chief operating officer position and will split responsibilities of the role among other members of the executive team. It said that as a result of this decision, McClelland is no longer with the company.

"In his leadership role, Bruce has made numerous contributions to Arris through the years," said Eddie Edwards, president and chief executive officer, CommScope. "Looking ahead, the new CommScope is well positioned and ready to shape the future of communications connectivity. We remain confident in the long-term growth potential for CommScope and our ability to help solve our customers' networking and connectivity challenges better than ever before."

McClelland's departure comes after CommScope had posted a Q2 12% decline in like-for-like net sales to US$2.61 billion. The company posted a net loss of US$334 million, down from a profit of US$65.9 million for the prior year.

Speaking on the company's earnings call in August, Edwards wished McClelland well "with his future endeavours".

The president and CEO added: "This decision to flatten our leadership structure expands accountability, which we've been striving to do in virtually every part of our company as part of our transformation."

Edwards said he was "taking a more active day-to-day operational role in leading our company through these challenging times."

On the Q2 earnings call, chief financial officer Alex Pease attributed the ongoing decline in revenues to "primarily the result of significantly reduced cable operators spending." Pease said that this is a an issue "which we and others in the industry have been experiencing throughout the course of the year".

The figures included Arris revenues of UIS$1.37 billion from the date of the acquisition. Customer premises pro forma net sales were down 9% to US$913 million, partly blamed on a shift of production out of China to avoid President Donald Trump's trade tariffs. Arris has already moved the production of some products to the Philippines, Vietnam and Indonesia.

Speaking on the earnings call, Edwards said that the Arris business's prospects for the year were "more challenging than we expected" thanks to reduced capital expenditure and cable operators' shifting priorities.

Edwards said that CommScope was "working with a renewed sense of urgency to execute our strategic plan and achieve our short-term and long-term goals" for the Arris business.

He said that the business was positioned to lead the transformation of cable operators' core networks as they evolve to a distributed access architecture.

Questioned in more detail about the shift to a distributed access architecture, where Arris is facing competition from the likes of the CableOS product line launched by Harmonic last year, chief technology officer Morgan Kurk said that CommScope's experience and market position would be critical in enabling cable operators to make the transition and that the company expects "to play both in the headend and the remote side and…to win in both".

# UK broadcasters launch OTT apps

**UK pay TV provider Sky has launched a new Sky Go app that combines existing Sky Q and Sky Go features, allowing customers to view content in a single experience at home and on the move, according to the company.**

The redesigned app includes a new UI offering one touch destinations such as Home, TV Guide, Browse, Downloads and Recordings.

It also provides a Browse page aggregating content by theme and genre from all channels on Sky Go, a feature offering personalised Sky Cinema recommendations, a recordings page where Sky Q customers can view and control upcoming recordings and series links, and enhanced accessibility and better navigation features to make it easier for visually impaired customers to use the app

The new Sky Go app will be available this summer on iOS, Android, Amazon Fire devices and Amazon app store as well as on PC and Mac. Customers will be able to update their existing app, or download the new version from the Google Play, Apple and Amazon app stores.

DTT operator Freeview has also launched a new version of its Freeview Play app on Android.

The Android launch follows the app's release on iOS earlier this year. Freeview Play, available from the Google Play Store, gives UK users access to stream shows from the BBC, ITV, Channel 4 and Channel 5, along with on demand content from BBC iPlayer, ITV Hub, All 4, My5, and UKTV Play.

In line with all things Freeview, the app is free to use with no download fee and no subscription.

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# People & places

The latest appointments, promotions and departures in the European digital TV industry

## Telia's Dennelind announces 2020 date for departure

**Johan Dennelind**, the chief executive of Swedish telco Telia, has announced his planned departure from his role after six years.

As per his contract, Dennelind will serve a 12-month notice period. The company has said that the search for a new CEO will start immediately.

During his time at the helm of Telia, Dennelind repositioned the company away from its complex holdings in Asia to focus on a localised Nordic expansion strategy. He also oversaw the company's bid for media group Bonnier's TV business, currently under investigation by the EU competition authorities.

Marie Ehrling, chair of the board of directors at Telia said: "During his six years as CEO, Johan has vigorously worked with the repositioning of Telia Company. The culture and strategy of the company have changed fundamentally and Telia is today a company with strong business focus that truly represents responsible business. Johan's strong and brave leadership has been crucial for this transformation. The board and I regret that Johan has chosen to leave the company, but at the same time we respect his decision to take a new step in his career. I also want to emphasize the very strong cooperation we have enjoyed during Johan's tenure as president and CEO. We have had several difficult and tough situations to address and the fact that Johan has always acted with strength and wisdom has been of great importance for the development of Telia. Johan has assured the board that he will continue in his present role with full force as long as it is needed during his notice period. This secures continuity and focus on several important projects and processes in the company."

Dennelind said: "It is a true privilege to serve as president and CEO of Telia Company, one of Sweden's oldest and largest companies. During the last years I have, together with the board and my team, implemented a transformation and re-alignment of Telia into a company that is well-positioned and well-equipped for the future. Telia Company is now entering a new phase with several opportunities for value-creation and with strong commitment from all our more than 20,000 employees. And it is after careful consideration that I now have decided to leave Telia and take on new challenges. I will continue in my role to drive our current agenda forward with full focus and commitment for as long as the board wants."

**Giorgio Stock** has been appointed president of WarnerMedia Entertainment Networks, distribution and ad sales for EMEA and APAC. The former Turner exec will oversee all entertainment networks, distribution of all networks, advertising sales and kids networks operations in Europe, Middle East, Africa and the Asia Pacific region. Stock first joined the business in April 2013 as president of Turner EMEA with executive oversight of all Turner kids and entertainment networks in the region, including digital and media services of Warner's core brands.

Ad tech company MediaMath has announced **Konrad Gerszke** as its new president. Gerszke will be tasked with leading the day-to-day business, including management of all corporate functions. He will be responsible for functions including commercial, services, product development, data science, engineering, operations, people, finance and legal. The exec joins from Nielsen Lead Markets where he was the firm's group president. Prior to that, he spent 13 years at management consulting firm McKinsey.

Content delivery vendor Synamedia has hired **Scott Kewley** as its VP advanced advertising and data products. In this role, Kewley will be tasked with leading the company's addressable advertising and data monetisation business. Kewley joins from UK OTT aggregator TVPlayer, where he served as MD. Prior to that, he was a senior exec at BBC Studios, spent six years at Liberty Global as director of digital entertainment for Virgin Media, and spent a decade at the Walt Disney Company in a variety of roles.

Industry veteran Fred Kogel has appointed **Stephan Katzmann** to the role of managing director for projects in the area of finance of his new media group. Katzmann will be responsible for managing the finances of production activities. He will also oversee the creation of a joint license database for the trading activities of the newly-founded media company, which will emerge from the Tele München Group, Universum Film, i&u TV and Wiedemann & Berg Film. He reports to Group CFO Joachim Scheuenpflug.

Telia Denmark CEO **Morten Bentzen** has left the company. Thomas Kjærsgaard, who heads Telia Denmark's enterprise unit, will take on the role in the interim until a new CEO is in place. Bentzen joined Telia in 2004 and took on the position of CEO at Telia Denmark in 2015. "This was a difficult decision. I value my talented and dedicated colleagues in Telia very much and the telecommunications sector has a dynamic that I will miss. However, the time is right to try new challenges," he said. Emil Nilsson, SVP and head of Telia LED and Eurasia added: "Morten has been a great colleague and contributor to both Telia Denmark's development and in the LED management team. His winning attitude and professionalism will be missed."

Consumer insight and media analytics firm MarketCast has announced the appointment of **John Batter** (left) as CEO. Current CEO **Henry Shapiro** (right) will assume the role of chairman. Batter was most recently CEO of Gracenote, establishing the company as a market leader ahead of its sale to Nielsen in 2017. Prior to that, Batter served as CEO of M-GO, a joint venture between DreamWorks Animation and Technicolor; president of production for DreamWorks Animation; and a senior executive at Electronic Arts. Shapiro saw MarketCast transition from being a predominantly domestic, theatrical-only research provider to focus on entertainment research and analytics worldwide, serving clients from diverse industries such as streaming, video games, sports and tech.

Video app platform developer You.i TV has appointed **Ken Taylor** to the role of CFO. Taylor will be responsible for creating and executing financial roadmaps in an effort to further establish the brand's reputation globally. The exec is a well known CFO, having held the position at March Networks, Proshred, BTI Systems, Yellow Pages, Optiva and the Ottawa Senators. Taylor also is known for serving as a longstanding chair of Audit and Governance Committees at Sandvine. Taylor said: "You.i TV has established itself as a company at the top of the cross-platform tools development food chain with great opportunity for further growth. I'm looking forward to delivering on the company's mission of reaching more customers."

WPP, the world's largest media investment organisation, has hired **Christian Juhl** as the CEO of its subsidiary GroupM. GroupM is the company's media-buying operation, and Juhl will assume the role from October 1. Juhl succeeds Kelly Clark and will be responsible for the vision, strategy and operations of WPP's media-focused companies. Juhl is currently global CEO of data measurement-driven agency Essence, which was acquired by WPP in 2015 and is now a sub-brand of GroupM. Prior to that, Juhl held roles at Publicis, Razorfish and USWeb/CKS. WPP CEO Mark Read said that Juhl has "the right combination of leadership, people and technology skills" to lead the company into the future.

## Pair of changes for Magine

OTT platform operator Magine Pro has promoted managing director **Matthew Wilkinson** (pictured) to CEO, replacing **Ambuj Goyal**, and has hired ex-Neulion executive **Luke Boyle** as chief commercial officer.

Wilkinson, who is taking over from Goyal as CEO, has a background in Ericsson where he held different management positions in Europe and Australia. Over the past year he has led Magine through the process of pivoting its business model, leaving the consumer market in Germany and Scandinavia to fully focus on serving content and telco partners on the Magine Pro OTT platform.

Boyle brings experience from the OTT and sports media sectors and will be responsible for all commercial activities for Magine Pro's OTT solutions and managed services. Previously, he led successful business development activities across EMEA and APAC at Neulion, now Endeavor Streaming.

"I couldn't be more delighted to join at this exciting stage in Magine's development. With the team, technology and operational capabilities at our disposal I am confident that we will achieve great success with our partners, both current and future," said Boyle.

Wilkinson said: "I am energised taking on this role, as we fully transition to a B2B company. We are leveraging the experience of running scale consumer businesses, and now taking our OTT platform solutions to market."

## Other moves...

AMC Networks-owned 'best-of-British' streaming service Acorn TV has appointed **Kerensa Samanidis** in the new role of general manager of Acorn TV International. She reports to Matthew Graham, general manager of Acorn TV.

Disney has announced the merger of its media sales and channel distribution into a single operation with **Justin Connolly** at the helm. He has the new title of president of media distribution and will be based in New York reporting to Disney direct-to-consumer and international (DTCI) chairman Kevin Mayer.

Spanish producer and broadcaster Mediapro has named Discovery France chief **Julien Bergeaud** as director-general of its French operation to head up the launch of its dedicated football channel, which will air top-tier French football from the 2020-21 season.

Mediapro said that the channel will launch in the summer of next year will offer uninterrupted coverage of French Ligue 1 and second division football, with nine matches aired each day from Ligue 1 and eight from Ligue 2.

Fast-growing combat sports streamer FITE TV has appointed industry veteran **Kim Hurwitz** as chief marketing officer. Hurwitz will lead all marketing and branding for FITE, the premier global platform for viewing Boxing, Bare Knuckle Fighting, Wrestling, MMA, Martial Arts, and combat sports via Pay Per View, subscription and free viewing options.

Research and strategy consultancy MTM has hired former Sky strategy director, chief operating officer and News UK CEO **Mike Darcey** as senior strategy advisor. Darcey will work with MTM's strategy practice, advising pay TV, media and sports industry clients.

# Final analysis

Kate Bulkley

## The new age of advertising

The rise of the SVODs has transformed the TV business. Ironically, even as traditional pay TV numbers are falling, the consumption of paid TV content is on the rise. The streamers' success, led by Netflix and Amazon, has helped drive a consumer shift along with the adoption of their business model by others.

However, as the SVOD surge crests, a counter-movement is recognising that advertising-funded TV is not going away anytime soon.

Big events like the football World Cup, which in 2018 was broadcast to a global audience of over one billion, shows the power of live TV. Granted, live sport is a distinct category, but there is a lot more happening in the advertising-supported space: not only are advertisers looking for new ways to engage with audiences, but this appetite to reach consumers is driving new business models and relationships.

Imitation is the sincerest form of flattery, and legacy media players from Disney to WarnerMedia are all playing the SVOD imitation game, clawing back content they previously sold to Netflix to bolster their new, own-brand services.

This is a strategy that must be adopted because audiences want the ease of use and the more personalised service that Netflix has pioneered.

But not every media company has the brands and content of a Disney, and not all the SVODs will survive, particularly as the landscape gets more cluttered. In more mature markets like the US there is already talk of 'subscription fatigue' in relation to how many US$7 to US$10 a month services any one person or household is willing to sign up to.

YouTube recently pulled the plug on putting original content and specials on a premium tier, including its *Cobra Kai* original series, and decided to go back to its original, ad-supported business model. About the only aspect of its originals strategy that remains is a push to create "region specific" originals to help raise the Google-owned site's profile in Europe, Latin America and Asia.

Advertising supported video, on the other hand, is not a shrinking business. According to the PwC Global Entertainment & Media Outlook report, television advertising globally rose 2% in 2018 and will rise at a 1.5% compound annual growth rate through to 2023.

One aspect of delivering a viable AVOD business is scaling up. Scale in general this has been a big media theme, illustrated by Disney's US$71 billion (€65 billion) purchase of 21st Century Fox's entertainment assets, AT&T's US$85 billion acquisition of Time Warner and Comcast's US$39 billion purchase of Sky. The recent deal that saw Hasbro pay US$4 billion for Entertainment One, owner of *Peppa Pig*, could be a sign that the next tier of smaller and mid-sized entertainment companies such as Lionsgate, MGM and AMC is coming into play.

The US$12 billion deal to re-combine CBS and Viacom is underpinned by the argument for scale and the power of advertising. Being big is important in order to compete. But unlike other legacy media players, ViacomCBS is placing a lot of emphasis on advertising-supported video. Viacom spent US$340 million on Pluto TV, an ad-supported on-demand service, and is now rolling this out around the world. On the other hand, CBS All Access, its premium streaming service, is going to benefit from access to Viacom brands including Showtime, Nickelodeon, MTV, Comedy Central and BET, not to mention the Paramount studio and series like *Transformers*.

> **"Not every media company has the brands and content of a Disney, and not all the SVODs will survive, particularly as the landscape gets more cluttered."**

Traditional linear TV is not dead but there is a lot of growth in OTT, and for companies hoping to benefit, working out the right way into that world is going to be key. The new TV ecosystem includes delivering different products and services in different ways, including tapping into customer discovery patterns that are very different from the traditional browsing of the TV guide as well as figuring out how best to monetise content, whether that involves personalised advertising or micropayments or who knows what else.

According to PwC, OTT revenue is projected to nearly double by 2023 to US$72.7 billion, even as revenues for traditional TV subscriptions and traditional TV advertising "essentially stagnate".

The watchword for media companies in this environment is 'customer-first', both to describe how services function and the kind of content to be commissioned. The new TV paradigm is about leaning into both SVOD and AVOD. ■

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