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Next-generation video compression technologies

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PPA

Dressed to compress

The emergence of digital TV; the entry into the video distribution business of telecom operators; the rise of large flat-panel TVs and the accompanying rise of HD video. All of these shifts in the quality and sources of video we watch on our TV screens were enabled to a large extent by technological innovations, and in particular by advances in video compression technology.

New video compression techniques have enabled service providers to push programmes down bandwidth-restricted pipes to consumers and to improve the resolution of those programmes to give people compelling reasons to watch them.

The development of MPEG-2 enabled the rollout of digital TV 20 years ago, while the development of H.264/AVC furthered the ability of telecom operators to deliver video over low-bandwidth copper networks and also allowed less bandwidth-constrained network operators to provide HDTV services.

Since 2012, the successor to H.264/AVC – High Efficiency Video Coding or HEVC – has been available, but its rate of adoption by video service providers has been slowed by what many regard as onerous and uncertain licensing terms. There are clearly applications that could provide incentives for video operators to adopt a more efficient way of delivering video – namely 4K UHD TV and mobile video – but this has not been sufficient – so far – to force a generational shift in compression technology. With growth in streaming, video providers have also been able to make use of adaptive bit-rate encoding to enable services to be delivered over congested networks with no loss of the service.

Now, a number of new alternative technologies have emerged – most notably AV1 – that could have a major impact on video delivery and spur further innovation. In this issue of *Digital TV Europe*, we take a look at the current state of play in the emerging battle for compression supremacy.

Also in this issue we look at the rationale behind Modern Times Group's plans to split its business into two parts, and talk to Jacinto Roca, CEO of movies-on-demand service Rakuten TV about new opportunities in the market, the potential for further SVOD launches and the need to make movies available sooner after their theatrical release date.

Finally, in the run-up to TV Connect and ANGA COM, we take a look at what to expect at these two industry events. ●

Stuart Thomson, Editor
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News digest

Comcast confirms £22 billion cash offer for Sky

By Stuart Thomson >

Comcast has made a firm cash offer for Sky that values the pay TV operator at £22 billion (€25 billion), with a commitment to maintain annual expenditure on Sky News for at least 10 years and to establish an independent editorial board for the channel.

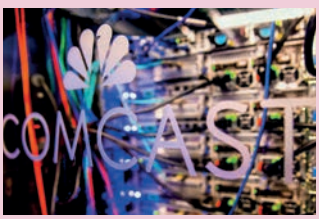
The announcement, which accompanied Comcast's Q1 results, puts the US cable and media group in a head-to-head battle with 21st Century Fox, whose existing bid for the company values it at £19 billion.

Comcast's bid would see Sky shareholders receive £12.50 in cash for each Sky share. In addition, Sky shareholders will be entitled to receive any final dividend in respect of Sky's financial year ended June 30, 2018, up to an amount of 21.8 pence per Sky share

The bid, wich will be financed by additional debt, is subject to regulatory approval and the support of over 50% of the voting rights of Sky shareholders. 21st Century Fox currently holds a 39% stake in the operator.

Comcast chairman and CEO Brian Roberts said the company had set an acceptance condition of 50% plus one share, and that he hoped Sky's independent directors would recommend the proposal. Roberts said he did not see any material issues with securing regulatory approval for the deal.

"We know that Sky is very important to the UK, and we respect that as this and part of our proposal today, we are making a number of intention statements: one, we will maintain Sky's UK headquarters at the Osterley campus, which is amazing; two, we will continue to support Sky as a leader in content creation, arts, culture and entertainment; three, we have tremendous respect for Sky News and its strong track record for high-quality editorial and journalistic independence, we will fully maintain that; four, we



will continue to support Sky's technology hub in Leeds; five, we will maintain Sky's Software Engineering Academy; and six, we will continue Sky's local community programmes," said Roberts in an investor call.

Roberts said that Comcast had "admired Sky for a long time", that the pay TV operator was "an outstanding business" and that there were "strong strategic benefits in combining Sky with Comcast".

He said that the European market was highly attractive and the acquisition would "create a leading platform for growth", combining Comcast's 29 million US customers with Sky's 23 million across the UK, Ireland, Germany, Austria and Italy.

Roberts said the combination would "fuel our ability to invest even further in innovation and drive more compelling financial returns". The acquisition of Sky, he said, would increase the proportion of Comcast's revenues from outside the US from 9% to 25%.

Speaking separately to US investors and analysts, Comcast finance chief Michael Cavanagh said that the deal was "not trying to solve for just being international for the sake of being international" and emphasised that Comcast was "not striving for diversification internationally just for its own sake". The attraction of the deal was Sky's specific value and performance, he said.

Responding to the move, 21st Century Fox said that it "remains committed to its recommended cash offer for Sky announced on 15th December 2016 and is currently considering its options. A further announcement will be made in due course."

Austria

IPTV > A1 grows TV base

A1 Telekom Austria saw its domestic and international fixed-line base decline in the first quarter, with growth in pay TV failing to offset a near across-the-board decline in fixed broadband and phone customers. Telekom Austria saw its domestic Austrian TV base increase by 4.1% to 302,000 in the first quarter, while its fixed broadband base declined by 2.3% and fixed voice base fell by 4.5%, leading to an overall fall in the fixed base of 2.8% year-on-year. Mobile subscribers also declined by 1.7%, driven down by a 10% fall in prepaid customers. In Bulgaria pay TV numbers grew by 2% to 488,100, while fixed broadband grew by 1.8% and voice declined by 19%. The overall subscriber base was flat at just over one million. Croatia followed the same pattern, with the pay TV base growing by 3.8% to 213,900, while fixed broadband and telephony declined by 2.3% and 4.4% respectively, leading to a dip in the overall fixed base. Slovenia saw pay TV subscribers grow by 1.5% to 54,200, with fixed broadband and phone customers both declining. In Belarus, where the operator entered the fixed market at the end of 2016, all customer segments grew, but pay TV led the way with 74.9% growth to reach 258,900 customers. Broadband grew by 61% while fixed phone customers grew by 10.9%. Mobile subscribers in Belarus were flat year-on-year. Macedonia bucked the trend, with pay TV numbers slipping by 0.3% to 123,500, while fixed broadband customers grew by 14.4% and fixed voice customers grew by 22.7%. Mobile customers declined over the same period.

France

IPTV > Bigger Orange

Leading French telecom operator Orange has increased its number of TV customers by 6.1% year-on-year to 9.097 million with strong gains in Spain and Poland. Announcing its first quarter results, Orange said that it upped its TV base by 19.6% year-on-year in Spain, recording 641,000 customers as of March 31, 2018. In Poland its TV numbers climbed 12.5% year-on-year to 875,000 customers. In Orange's home and largest TV market, France, it grew its subscriber count from 6.69 million in Q1 2017 to 6.87 million in Q1 2018. Overall the company announced 2.0% revenue growth to €10.08 billion. Adjusted EBITDA was up 3.8% to €2.61 billion.

IPTV > TF1 secures Free

TF1 Group has struck a distribution deal with Iliad Telecom/Free. TF1 said the agreement covered both linear channels and associated non-linear services, with Free subscribers set to benefit from "innovative functionality". The agreement covers catch-up services on the MYTF1 service, with extended windows for content, the availability of some programmes in an avant-première window ahead of their airing on terrestrial TV and unspecified advanced functionality that will "allow free to launch new services". In addition, the deal will bring two time-shifted channels to Free customers – TF1+1 and TMC+1 – later this year, as well as event-based programming in 4K UHD. The carriage deal also covers digital channels TV Breizh, Ushaïa TV, Histoire and TFOU Max.

Germany

SAT > SkyQ launch date

Sky Deutschland is to launch the advanced Sky Q service in May, offering features that have been available to viewers in the UK and Italy, including personalised TV, UHD TV, startover and auto-play. Sky Q will be available to the pay TV operator's subscribers in Germany and Austria, with Sky+ Pro subscribers getting an automatic upgrade. Sky Q will also be offered automatically to all new Sky customers. Sky Deutschland is also launching a new version of its Sky Ticket OTT offering, which makes Sky programming available across a range of devices with no fixed-term contract. Sky Q provides access to Sky content via a new user interface on up to five devices .

Facebook to up video investment in 2018

By Andy McDonald >

Facebook plans to ramp up video investment throughout the rest of the year as it looks to differentiate its offering from rivals like YouTube by focusing on personal connections.

Speaking on the company's first quarter earnings call, CEO Mark Zuckerberg said that while passive video consumption is down on the site – a result of recent tweaks to how the Facebook prioritises content – it is stepping up efforts around interactivity. "We're trying to make a different experience than what you might be able to get on YouTube or any of these other services by making it more about connecting with people in different ways," said Zuckerberg.

He claimed that Watch Party, a new feature designed to let groups of people watch content and interact, is something that

Facebook is uniquely positioned to build. Interactivity also ties in with Facebook's video commissioning strategy for its Facebook Watch platform.

Asked whether Facebook had invested much on video content in the first quarter of the year, CFO David Wehner said, "It's clearly going to be more weighted towards the rest of the year". However, he also said that Facebook's gross margin declined slightly, in part because of video content investment.

Facebook reported strong revenue and earnings growth, despite the recent Cambridge Analytica scandal, which broke two weeks before the end of Q1, and the resulting scrutiny of Facebook's data and privacy policies.

Asked about whether recent events had caused any changes in advertisers' views about the platform, COO Sheryl Sandberg said: "In the immediate days of the concern we heard from a handful of advertisers who paused spend, one of whom has already come back. We haven't seen a meaningful trend or anything much since then."

Sandberg also played down the suggestion that Facebook might try and follow media rivals like Netflix or Spotify by exploring a subscription model.

"We certainly thought about lots of other forms of monetisation including subscriptions, and we'll always continue to consider everything," said Sandberg. "Ads for us is a very natural fit for our business, and we have a lot of runway ahead of us."

Events

TV Connect
Date: 9 - 10 May
Venue: Olympia, London, UK
W: tmt.knect365.com/tv-connect/

Internet of Things World
Date: 14 - 17 May
Venue: Santa Clara Convention Center, California, US
W: tmt.knect365.com/iot-world

Northern Waves
Date: 31 May
Venue: Gamle Logen, Oslo, Norway
W: www.northernwaves.tv

New Europe Market
Date: 11 - 14 June
Venue: Dubrovnik Palace Hotel, Dubrovnik, Croatia
W: neumarket.com

ANGA COM
Date: 12 - 14 June
Venue: Köln Messe, Cologne, Germany
W: www.angacom.de

VR & AR World
Date: 12 - 14 June
Venue: ExCeL London, UK
W: tmt.knect365.com/ar-vr-world

Broadcast Asia
Date: 26 - 28 June
Venue: Suntec, Singapore
W: www.broadcast-asia.com

IBC 2018
Date: 13 - 18 September
Venue: Rai, Amsterdam, The Netherlands
W: show.ibc.org

MIPCOM
Date: 15 - 18 October
Venue: Palais des Festivals, Cannes, France
W: www.mipcom.com

Global Wrap

Watching television remains the activity that children aged three to 16 dedicate the most time to, according to **Futuresource Consulting**'s latest Kids Tech Consumer Survey. Across the surveyed countries – which included the UK, France, Germany, US, China, South Korea, Indonesia, Mexico and Brazil – kids were found to spend an average of 4.8 hours per week watching TV. **YouTube** removed more than eight million videos from YouTube in the fourth quarter of 2017, most of which were either spam or adult content. The video site revealed the information in its first quarterly YouTube Community Guidelines Report. Pay TV subscriptions declined in the Middle East and North Africa (MENA) region in 2017 while online video subscriptions grew 48% year-on-year, according to **IHS Markit**. The research firm said that MENA pay TV subscriptions fell 21% to 4.2 million in 2017, with the growth reversal linked to the regional boycott of Qatar, home to **BeIN Media**. **Netflix** added a record number of first quarter subscribers and grew its streaming revenues by 43% year-on-year. Netflix added 7.41 million members in the first quarter – 1.96 million in the US and 5.46 million internationally. This was up 50% compared to Q1 2017 and was ahead of the company's own forecast. **CBS All Access**, CBS' SVOD service, has launched in Canada, its first international launch. For C$5.99 (€3.82), CBS All Access will offer viewers over 7,500 commercial-free episodes on-demand, as well as the ability to live stream CBSN CBS News' 24/7 news service.

Italy

DTT > Mediaset in the black

Mediaset returned to the black last year, posting a net profit of €90.5 million – up from a loss of €294.5 million last year – on revenues of €3.631 billion, down from €3.667 billion. The improvement was helped by an 11.1% cut in operating costs. Mediaset's result in 2016 had been hit by the impact of its aborted pay TV deal with Vivendi. Mediaset said that it expected advertising revenues to improve this year, despite a negative trend in the first two months, followng a dip in ad sales in Italy last year. The group expects its exclusive rights to air the football World Cup in both Italy and Spain will help it improve its performance, but noted that market visibility remains poor. The group also highlighted the "transformation" of its pay TV offering Mediaset Premium, which it said was now "less rigidly dependent on football" and based on a new model that involved opening up the digital-terrestrial pay TV platform "to third parties". Mediaset recently struck a wide-ranging pay TV deal with rival Sky whereby its pay TV services would be offered alongside Sky's on satellite and Sky would develop an offering to sit on the DTT platform.

Poland

OTT > TVP SVOD service

Polish public broadcaster TVP has launched its own subscription video-on-demand service, Strefa Abo, providing about 150 movies and series for a monthly fee. The service includes archive content from the BBC, such as Allo Allo, War and Peace, House of Cards and Pride and Prejudice, as well as Polish series and other international series. Maciej Stanecki, board member at TVP, said that the group's vod.tvp.pl site, which was launched two years ago, counted over 3.2 million unique users in March this year and 48.6 million page views. He said that TVP had a record number of sports broadcasts, series and films on the site, with further growth expected during the forthcoming World Cup football tournament in Russia. Stanecki said that Strefa Abo – Subscriber Zone – would enable it to build a stronger relationship with its viewers. The service is available free of charge for the first 14 days, after which a monthly fee of PLN9.99 (€2.38) applies. Netflix in Poland is priced at PLN34 by way of comparison. Some groups, such as

Amazon to up video spend throughout the year

By Andy McDonald >

Amazon said it plans to increase its spend on video throughout 2018, after the company more than doubled its profits in Q1.

Speaking on Amazon's first quarter earnings call, chief financial officer Brian Olsavsky said that "video content spend will increase year-over-year" and predicted that areas of strength like Amazon Web Services and advertising will continue to perform for the company.

Asked whether Amazon would include advertising around its Prime Video offering, Olsavsky said: "There may be opportunities over time to have more advertising in our video, but we choose not to do that right now."

The comments follow reports from last year claiming that Amazon was developing a free-advertising-supported offering to complement its Prime Video subscription video-on-demand service.

For the three months ended March 31, 2018, Amazon reported revenues of US$51 billion (€42 billion), up 43% year-on-year. Net income more than doubled to US$1.6 billion, compared to US$724 million in Q1 2017.

The results sent Amazon's share price to an all-time high in after-hours trading after it climbed by more than 7%.

The news comes a week after Amazon chief Jeff Bezos revealed in his yearly shareholders letter that Prime now has 100 million members, which he partly attributes to continuing content expansion.

In the statement, Bezos said that Prime Video continues to drive Prime Member adoption and retention, adding that it had recently launched new seasons of *Bosch* and *Sneaky Pete* from the US, *The Grand Tour* from the UK, and You Are Wanted from Germany, among others.

Olsavsky: spending on video content will increase.

In December research firm Ovum predicted that Amazon will overtake Netflix to generate more over-the-top video revenue in 2018 thanks to its "growing array of ways to pay for video".

The research firm said that Amazon's combination of subscriptions, digital rentals, electronic sell-through and bundles of TV apps will see it generate US$5.8 billion in video-related revenue in 2018, compared to US$5.3 billion for Netflix's subscription-only offering.

elderly and disabled viewers, will be able to access the service for free, according to Stanecki. TVP has said it will make new titles available on the service every quarter.

Portugal

IPTV > Gun-jumping appeal

International cable and telecom group Altice has said it will appeal a decision by the European Commission to fine it €124.5 million for 'gun jumping' the regulatory green light to acquire PT Telecom – now Altice Portugal – in Portugal in June 2015. The EC ruled that Altice infringed the 'prior notification obligation' relating to mergers and acquisitions. The Commission said that Altice had made certain provisions in its purchase agreement for the Portuguese operator that resulted in it acquiring the legal right to exercise decisive influence over PT Portugal, for example by granting Altice veto rights over decisions concerning PT Portugal's ordinary business. It also found that Altice had exercised influence over parts of PT Portugal's business, for example by iving PT Portugal instructions on how to carry out a marketing campaign and by seeking and receiving detailed commercially sensitive information about PT Portugal outside the framework of any confidentiality agreement. In setting out the reasons for its decision to appeal to the EU General Court, Altice said that the PT Telecom case differed substantially from previous 'gun jumping' sanctions imposed by France's competition watchdog relating to its acquisition of SFR and Virgin Mobile France. Altice also said that the EC's file on the case failed to establish that Altice had exercised influence over PT Portugal's business before its merger notification to the Commission or ahead of receiving the green light. Altice said that the EC's ruling "would have serious consequences for European companies" and set a precedent that would "have an impact on all future M&A transactions in Europe and consequently on the EU economy" if it went unchallenged.

Spain

IPTV > Telefónica subs up

Spanish and international telco Telefónica saw its global pay TV base grow by 5% year-on-year to reach 8.6 million at the end of the first quarter, with 137,000 net additions in Q1 actually exceeding the Q4 2017 figure of 92,000. Growth in subscriptions was driven by IPTV, which grew by 18%. The quarter saw the launch of Telefónica's Movistar Series channel, which will take its 12 original TV series to over 13 countries this year via the Movistar TV and Movistar Play OTT platforms. Global video revenues remained largely unchanged, up 1% to €722 million for the first quarter. In Spain, Telefónica's Movistar offering added 500,000 TV customers year-on-year, including 80,000 in Q1 – about the same number as in Q4 last year – to take its total to 3.9 million. The growth was driven primarily by the success of the operator's convergent offering, Movistar Fusión, which added 34,000 customers in the first quarter and accounted for 88% of TV subscriptions, up six percentage points year-on-year, as well as 86% of broadband subscriptions and 81% of mobile contracts.

BBC to 'reinvent the iPlayer' to remain relevant to Millennials

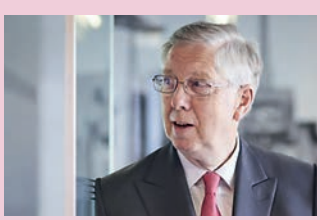
By Andy McDonald >

The BBC will focus on reinventing the iPlayer this year and making it more of a destination for young people, according to BBC chairman David Clementi.

Outlining how the BBC will face challenges like changing viewing habits and competition from global giants like Netflix and Amazon, Clementi said that the BBC's focus on modernising its services will allow it to alter how it delivers content to audiences and how they respond.

Speaking at the Voice of the Listener and Viewer (VLV) Spring Conference in London, Clementi said that while the BBC's public service mission is more important than ever, it has also become harder than ever.

"This year we are focusing on reinventing iPlayer to provide the individual, personalised service they more and more expect – not just offering audiences programmes we know they love, but also suggestions for what they might like or need to know."



He said the BBC is also reinventing radio services, with plans to transform iPlayer Radio to bring together the BBC's radio and audio content – including a growing range of podcasts.

Addressing the different needs of audience demographics, Clementi described the 16-34 age group as the BBC's "biggest challenge".

"They watch less TV than older people and listen to less radio. They are the smartphone generation and their view of the world is shaped by social media. It is a generation with which we have to work hard to remain relevant," he said

Clementi said that a recent meeting between BBC board members and a group of 20-24 year-olds in Coventry demonstrated that young adults primarily get their news from social media and expect to access all episodes of a TV series at once – and for a longer period than the 30-day limit that applies to much of the content on the iPlayer.

"While they go to iPlayer to find favourite and recommended programmes, it was clear to me that we need to do more to encourage them to browse the service and discover something surprising or new," said Clementi. "We want to grow iPlayer as a destination for young people, as well as for all audiences. Not simply a catch-up service, but a place to browse and look for new material."

In terms of appealing to even younger viewers, he spoke about the BBC's 2017 commitment to spend an additional £34 million (€39 million) on children's content in the coming years and about the recent launch of CBBC Buzz, a social mobile app for children aged under 13.

Older viewers, Clementi said, are like younger viewers in the sense that they continue to consume media via both traditional and newer methods. "In distinguishing between older and younger viewers, it would be wrong to see this as a distinction between linear and digital consumption," he said. "We're increasingly seeing the benefit of using iPlayer to highlight content from our linear channels, and equally using our linear channels to draw people's attention to content online."

Sweden

SAT > MTG on the up

Modern Times Group (MTG) reported strong first quarter results with 9% organic growth and profits up 73% as it prepares to split the business into two by spinning off its Nordic Entertainment group.
For the January-March period MTG reported record Q1 sales of SEK 4,674 million (€450 million). This compared to SEK 3,704 million a year earlier, with 9.2% organic growth. Earnings before income and tax (EBIT) climbed 73% year-on-year to SEK 237 million, while net income increased 74% to SEK146 million. MTG said that Q1 was its seventh consecutive quarter of more than 5% organic sales growth, attributing this to the investments it has made in its content portfolio and digital products. Digital sales were up 88% in the quarter and accounted for 35% of total sales.

United Kingdom

OTT > Amazon for tennis

Amazon has agreed a five-year deal to broadcast live and on-demand coverage of the US Open Tennis Championships to Prime Video Members in the UK and Ireland.The deal, agreed with the USTA – the national governing body for the sport of tennis in the US – is due to begin with the 2018 US Open in August. Prime Video members in the UK and Ireland will be able to access live matches, on-demand match highlights and other content at no additional cost.

PROG > Ofcom probes RT

UK media and telecoms regulator Ofcom has opened seven new investigations into Russian overseas news channel RT following the nerve agent attack on a Russian exile and his daughter in the city of Salisbury. Ofcom said that RT parent TV Novosti's overall compliance record with its licence had not previously been out of line with other broadasters, but that since the Salisbury attack on Sergei and Yulia Skrypal the regulator had observed a "significant increase" in programmes on RT that could be in breach of the Ofcom Broadcasting Code. In determining whether TV Novosti, which is considered to be a state-backed broadcaster, is a 'fit and proper' holder of a UK licence, Ofcom said it was "not possible or appropriate for us to seek to reach an independent determination on the events in Salisbury" and that "the most appropriate way to consider whether TV Novosti is likely to act in a fit and proper way is to consider its broadcasting conduct". Ofcom said that it would reveal the outcome of its investigations as soon as possible.

EU bodies agree 30% European quota on Netflix-type services

By Stuart Thomson >

The European Parliament, European Council and the European Commission have struck a preliminary deal on revisions to the audiovisual media services directive that will see new quotas imposed on subscription video-on-demand services.

The new rules will include an obligation on OTT TV services, promoted by the Parliament, to respect a quota of 30% for European works on their platforms. The level of the quota follows the European Council recommendation of a 30% quota in May last year and goes well beyond the 20% level proposed by the EC two years ago, when it first presented planned updates to the directive as part of its digital single market strategy.

VOD and SVOD platforms will also be asked to contribute to the development of European audiovisual production, either through a direct investment in content or a contribution to national funds. The level of contribution in each country should be proportional to their on-demand revenues in that country – meaning member states where they are established or states where they target the audience.

The Parliament also secured measures to protect the integrity of broadcast signals, with an obligation on service providers not to add a window with content to the screen during the transmission of a programme on smart TVs.

The new rules include strict regulations on advertising or product placement in children's TV programmes or content available on video-on-demand platforms.

The law will also see a loosening up of rules on advertising, with a maximum 20% quota of advertising of the daily broadcasting period between 06.00 and 18.00, giving the broadcaster the flexibility of adjusting their advertising periods outside primetime, instead of respecting the current limit of 12 minutes per hour.

Parliamentary negotiator Petra Kammerevert said that the outcome was "well balanced, especially with regard to the scope of the directive, including video-sharing platforms and audiovisual content on social media, a more level playing field for all communication stakeholders, and protection of European works", while negotiator Sabine Verheyen said that the Parliament had "negotiated a level of protection for internet media services similar to that in place for traditional broadcast media".

Other elements of the revised directive include a strengthening of the 'country of origin' principle, with what the EC said would involve greater clarity on which state's rules apply both for broadcast and VOD services.

The legislation will also be extended to video-sharing platforms, including Facebook and YouTube. The directive will also see new measures to ensure the independence of national audiovisual regulators, which must be independent of government and other public or private bodies.

Negotiations will officially end in June when the Parliament, Council and Commission will meet to finalise and discuss remaining details. After confirmation by the Council and the European Parliament's plenary vote, the new rules will then have to be transposed into national law.

For the Commission, EU vice-president for the digital single market Andrus Ansip said: "These new rules reflect digital progress and recognise that people now watch videos in different ways than before. They encourage innovative services and promote European films – but also protect children and tackle hate speech in a better way."

French media regulator the Conseil Supérieur de l'Audiovisuel (CSA) was quick to welcome the proposed rules, and in particular the extension of regulation to video-sharing platforms and the obligation on SVOD providers to provide European content.

ABOX42

Q&A: Oliver Soellner, ABOX42

Oliver Soellner, member of the management board at ABOX42, talks about the advantages of turnkey solutions for TV service providers.

What are the main challenges facing telecom operators in launching TV services and keeping them up-to-date?

The TV market is developing very fast nowadays, so there is a constant need to innovate and keep up with the latest developments, always a need to observe the latest technologies and trends on the market. This is quite new for traditional operators (e.g. cable operators) who are not used to acting agile and keeping up with the market and competitors, since in the past TV services were mainly linear, without much interactivity.

Today there are many new possibilities in terms of features and services (network PVR, restart TV, on-demand services, OTT services), which requires a much more flexible TV solution including a strong set-top box platform to be able to introduce new features over time and keep up with technology trends.

What are the main technology innovations that are changing the way IPTV systems are implemented and what impact will they have?

Looking at recent technology innovations, UHD/4K seems to be a main driver for change these days. UHD/4K requires changes in the complete content delivery system, starting with the introduction of H.265/HEVC for more efficient content distribution and enhanced content security requested by content owners. These technology changes have an impact on the whole production and delivery system (production equipment, encoding, transcoding, streaming and end-user devices such as the operator set-top box). Such change needs solid planning and has quite an impact on operator TV solutions.

Apart from UHD/4K we see a major trend on the operator side to provide comprehensive multiscreen services on multiple devices, which also allow interactions between mobile devices and the set-top box e.g. for content discovery on mobile, playback on TV, essential control functions as well as remote programming of recordings.

Due to the fact that infrastructure is evolving fast and operators are able to offer decent broadband connections on DSL and fibre, more and more end-customers are getting access to new IPTV and hybrid solutions.

What are the main advantages for operators in choosing a turnkey IPTV system as against developing a platform using multiple suppliers?

Choosing a system from a trusted partner means choosing a solution from someone who is a specialist in his field. It is easier, faster and cheaper to rely on the trusted technologies of a turnkey IPTV solution than investing lots of time and money in operators' own developments and investigations.

Next to cost, a turnkey solution reduces the overall project complexity for the operator, allows the operator to grow seamlessly and benefit from a steady evolvement of features and functions.

Last but not least a turnkey solution takes away a lot of hassle from operators maintaining the solution including all applications, which requires steady development to maintain compatibility of all apps (e.g. iOS, Android, Windows).

To what extent are turnkey solutions more suited to the needs of small and medium-sized operators, and to what extent are larger players likely to go down this route?

We have seen a clear trend for a couple of years already towards white label multiscreen IPTV and hybrid solutions, and not only with smaller/ medium size operators who could not handle a complex project and do not have the budget for it.

Even larger operators are increasingly considering hosted and managed solutions, since the history shows that many operators struggled with their legacy solutions by managing a complex project in-house, which has a lot of room for failure and requires quite a strong in-house product management and organisation with various stakeholders.

With a turnkey solution the project complexity is much reduced, which allows the operator to focus on his major strength in marketing and sales.

How much flexibility does a turnkey offering give to service providers to differentiate the user experience and their overall offering?

In the past one of the arguments of larger operators made against white label/ turnkey solutions was that these solutions do not offer enough customisation possibility. Today, this is also becoming less of an issue, since most modern TV middleware solutions are browser-based and do offer a high level of flexibility for customisation and UI changes to achieve a unique user experience across all screens, while still leveraging the advantages of a white label/turnkey solution.

Sign of the times

MTG's decision to split into two, with businesses focusing on broadcasting and streaming and growth areas such as eSports respectively, was a long-term strategy, according to MTG corporate affairs chief and UK CEO Matthew Hooper. Stuart Thomson reports.

Modern Times Group's (MTG) decision to invest heavily in eSports, multichannel networks and online gaming, and subsequently to split in two, was the result of a careful assessment of the future entertainment services and a realisation, following the launch of its Viaplay SVOD service, that people were moving to different forms of entertainment, according to Matthew Hooper, recently appointed as EVP, group head of corporate affairs and CEO, MTG UK, and soon to hold the same position at broadcast arm Nordic Entertainment Group UK.

"We decided to self-disrupt," Hooper told attendees at an event organised by Ampere Analysis in London recently. "We did it to ourselves before it was done to us." The decision to split the group in two, with the MTG brand reserved for the high-growth areas of eSports, MCNs and online gaming and a new company, Nordic Entertainment Group, taking over the free and pay TV activities, streaming outfits and production activity, which was announced in March, was a logical extension of this strategy and had been in train in some shape or form "for a long time".

He said that MTG set an ambition in 2013 to become a digital entertainment company rather than a channels group. While the development of online video services Viaplay and Viafree was already in train, the bulk of the group's business was in linear TV, something that remains the case: "That represents a strong installed base that is gradually moving towards the streaming space, but it is still very important today."

MTG's initial decision to focus its future investment efforts on eSports and multichannel networks as the key growth areas, was the first step. The group bought into eSports through its acquisition of a majority stake in Turtle Entertainment, owner of eSports leader ESL; acquired Scandinavian eSports firm Dreamhack; and expanded into multichannel networks with the acquisition of ZoominTV. Investments in gaming outfits Kongregate and InnoGames followed.

The decision to split in two followed the failure of a proposed sale of the Nordic Entertainment arm to Danish telco TDC, leaving MTG to focus as planned on new growth areas. However, Hooper said that the sale plan was essentially part of the same strategy.

TDC pulled out of the plan after it received an acquisition offer from Australian infrastructure investment outfit Macquarie, which made ending the MTG plan a condition of its offer. Hooper said that MTG still had a strong relationship with TDC and there were lots of links between the two companies. However, he said the cancellation of the TDC sale was "a missed opportunity" for both sides to create a fully converged telecom and media company.

The architecture of the split follows lines that already exist within MTG. The Nordic Entertainment business will combine with MTG Studios including production arm Nice Entertainment and YouTube network Splay Networks, "which is more about influencer campaigns now", according to Hooper, and is being taken out of the former MTGx digital portfolio. The addition of Splay Networks to Nordic Entertainment makes sense because it also has "a very Nordic focus".

Hooper said that since content can be distributed across linear and streaming services, it made sense to have Viaplay and Viasat put together with content production. The third part of the strategic shift, was the sale of MTG's international businesses, which was completed by the sale of its majority stakes in Bulgaria's Nova Broadcasting to investment outfit PPR, and urban culture media group Trace to TPG Growth. MTG sold out of its international businesses to finance its investment in new areas.

The decision to finance the MTG-Nordic Entertainment split through a distribution to shareholders would result in a well-financed MTG business set for growth, said Hooper, leaving debt with the more established Nordic Entertainment Group.

On the MTG side, Hooper said that both eSports and gaming are huge growth opportunities, and that advertising and sponsorship around eSports could be extended beyond the core young-male audience. "eSports enthusiasts are typically younger but it does extend," he said. "Brands like Mercedes and others are coming in. And everyone knows the size of the mobile gaming market. With Kongregate you have 100,000 free to play games. You have gaming IP being created every day."

On the Nordic Entertainment side, Hooper said that a large amount of revenue and profit still comes from traditional TV businesses and that is important in securing the financial future of the company. He said that the new company would benefit from the fact that Nordic content "travels very well".

MTG has seen that the group had a good opportunity to create original content for Viaplay, and Nordic Entertainment has an opportunity to go further, he said. Viaplay continues to be well-placed to compete in the Nordic streaming market, offering premium sports, as well as a strong first-play window and the resources to create original content. "[Netflix is] quite different, but they have been fantastic for broadening the appeal of SVOD and streamed content," he said.

Hooper added that, in general, TV could still be a growth business, whatever the superior growth trajectory of eSports.

"Convergence is a reality but the strategy we have had is... making our content available very widely."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The proliferation of video-capable devices and streaming services, combined with the advent of UHD TV means that the pressure is on to find more efficient ways of forcing video down bandwidth-restricted pipes. However, with multiple video compression formats emerging to challenge existing dominant technologies, is the scene set for a period of confusion and fragmentation? Stuart Thomson investigates.

It is a truth universally acknowledged that a video service provider in possession of an expanding customer base must be in want of a more efficient way to deliver content.

No matter how rapid the expansion of available bandwidth, the volume of video traffic will expand to fill it. The dramatic and ongoing growth in IP video consumption, and ever-growing expectations among consumers about the quality of that video, therefore means that advances in video compression remain a key objective for the video industry.

It is not only about pure volume. The rapid increase in non-linear and mobile video consumption, combined with the advent of 4K UHD TV, adds to the pressure on the internet and adds costs to traditional broadcast delivery respectively.

Most industry experts also believe that broadcast will account for an ever-declining proportion of global video delivery in the future, meaning that bandwidth-saving technology for unicast delivery will be even more in demand.

The most commonly used compression standard for digital video distribution applications, AVC/H.264, has now been around for a long time. Ongoing improvements to the technology – beyond what was expected when the standard was first created – have given AVC a longevity that would have surprised its creators.

The putative replacement standard for H.264 is HEVC/H.265, which was standardised as long ago as 2012 – six years ago. While millions of HEVC-capable devices such as set-top boxes have been deployed, the standard has not been as widely adopted by broadcasters and service providers as some expected, primarily due to industry concerns about costly licensing terms. While some of the issues around licensing have now been resolved – notably the fee for streaming applications was recently cancelled – the presence of three separate licensing bodies has contributed to this confusion and uncertainty, which remains a fact of life for those looking to adopt the technology.

"We had expected to see more activity in the pay TV space, but cable operators have not had the bandwidth to simulcast [using different formats] and IPTV operators have not jumped on it," says Richard Peske, vice-president, video compression and advertising products at technology company Arris, which in the compression space specialises in live video applications.

While HEVC-capable set-tops have been available for the last few years – including boxes from Arris – Peske says that few IPTV operators have made the switch. For cable, he says, upgrading to HEVC would likely be an accompaniment to launching an IPTV service once they have access to sufficient DOCSIS bandwidth as part of the longer-term shift away from DVB-C – something that has not happened yet. However, the main reason that HEVC has been of relatively limited use so far is the licensing issue, he says.

"The patent pools confusion – with three different pools and other [companies] not in any – have not helped the situation, but things are slowly getting cleared up," says Peske, who cites Apple's endorsement of HEVC as a possible catalyst for change.

Potential challenge

Other codecs have now emerged that could potentially challenge the primacy of HEVC for next-generation video applications. The key technology in this respect is AV1, an open-source codec developed by the Alliance for Open Media (AOM), a group of powerful companies that includes Google, Mozilla, Netflix, Microsoft, Amazon and Apple.

Many claims have been made on behalf of AV1, and the technology has generated considerable buzz, particularly since the AOM's release of the AV1 bitstream specification at the end of March along with a reference software-based encoder and decoder. However, there are major issues that are likely to hinder adoption – particularly the processing power required on the encoder side compared with HEVC.

Arris's Peske says that his company has not seen much interest in AV1 to date for live broadcasting, though he concedes that there is "more interest in VOD". AV1, he says, is "so much more computationally intensive" – in other words requires much greater processing horse-power – than HEVC that it only makes sense for file-based encoding. He adds that one of the supposed key advantages of the technology over HEVC – that it is royalty-free – is less important than is sometimes claimed because of the need on the part of users for indemnification against possible infringement of patents that have not yet come to light.

If its supporters are to be believed, however, AV1 should certainly be considered a viable alternative to HEVC. The AOM claims bitrate savings of 30% compared with the open-source x265 implementation of HEVC for file transcoding.

Some industry players nevertheless challenge these claims. Technology provider Harmonic earlier this year teamed up with the Institute of Research and Technology B<>COM to test AV1 and found that HEVC still outperforms AV1 on subjective testing. "In summary, compression efficiency currently seems to be equal between the two codecs for file-based applications," says Thierry Fautier, VP of video strategy at Harmonic.

Tony Jones, principal technologist, media solutions at Ericsson, is of a similar opinion, arguing that AV1 "needs to be tested more rigorously" and that these tests need to be "like-for-like". Based on preliminary analysis, he says bit-rate efficiency seems to be "pretty similar" to HEVC, while AV1 requires considerably more processing power.

Jones is sceptical about AV1 winning widespread adoption. "AV1 is obviously being positioned as a rival to HEVC. If the market wanted to move to it, based on the fact that its performance was dramatically different – which is contrary to what we expect – we would go with that," he says. However, based on findings so far, it seems that "AV1 has yet to be optimised and that it has a long way to go" before it can seriously rival HEVC.

"The idea that there is a wholesale drive towards internet-style delivery is naïve. There will be pressure to do things a bit more sensibly."

Tony Jones , Ericsson

This view is echoed by Peske. While he believes AVC will have many more years to run as the prime distribution technology, the next step is likely to be HEVC rather than AV1. "As we're focused on live video, we are betting on HEVC," he says. Peske says that HEVC is unlikely to deliver huge improvements on what it can already do in terms of bandwidth optimisation going forwards, but suggests that the more widespread use of adaptive bit-rate encoding will have an important role to play in how compression technology is deployed. He suggests there could be 'mixed ladders' of encoding in the future, with HEVC deployed for higher-resolution video and AVC used for lower-resolution versions of the same content.

While established technology players such as Ericsson and Harmonic remain convinced that MPEG standards such as HEVC will stay at the core of video delivery for traditional broadcast and pay TV delivery as well as much of online video, this doesn't mean that AV1 will have a nugatory impact on the market. On the contrary, the availability of an alternative means that the HEVC community is under more pressure to get its act together – meaning that one of the biggest impacts of AV1 could be to boost HEVC.

"HEVC is great technology that has only been hampered by the licensing terms," says Fautier. However, he adds, the presence of AV1 as a potential alternative has already concentrated minds, pointing to the decision of HEVC Advance, one of the technology's three licensing bodies, to cancel the fee for streaming applications. This impact, combined with the fact that HEVC devices are already widely penetrated, means that HEVC has a strong future, he says.

"In terms of commercial deployments, for VOD OTT, all members of AOM have indicated that they will deploy the codec as soon as devices are available, which is not expected to occur until after 2020. By this time, the number of HEVC-only capable devices is expected to be more than 10 billion. In other words, the industry will still need HEVC for many more years," he says.

Hardware availability

Not everyone agrees that HEVC will dominate video distribution in the future, however. Christopher Mueller, chief technology officer and co-founder at Bitmovin, a company that has been at the forefront of AV1 and a key player within the AOM, claims that the 50% improvement from AVC to AV1 and licensing uncertainty about HEVC will play in AV1's favour. Regarding uncertainty about patent claims on AV1, he said that the "large number of companies" supporting the technology will protect those adopting it from the claims of smaller technology players.

Mueller says that AV1 will be available on hardware from 2020, which will kickstart wider adoption, and points out that the support for the codec of both Google and Apple should not be discounted. The technology is a significant improvement on its predecessor, the VP9 codec used by YouTube, adding DRM encryption for example. He says that the key industry factor that will drive adoption is the need to fit more video into the same amount of bandwidth. He dismisses the objection that AV1 is massively more computationally intensive than HEVC, arguing that for larger players in particular, the bandwidth savings more than offset the computational effort. Mueller also says that Bitmovin's AV1 implementation reduces the processing power differential with HEVC to a factor of 10 rather than a factor of thousands.

For all these reasons, Mueller believes that AV1 will gain a significant market share. "In the broadcast space HEVC will still be the choice but in the OTT space it will be AV1," he says, adding that, in his view, this gives a longer term advantage to the newer codec. "In the future linear TV will more or less go away – the younger generation is not watching linear TV anymore."

"In the broadcast space HEVC will still be the choice but in the OTT space it will be AV1."

Christopher Mueller, Bitmovin

The last point is moot. The view that broadcast is on the way out is certainly challenged by Ericsson's Jones. "Anytime you switch to unicast there is a cost," he says. "The idea that there is a wholesale drive towards internet-style delivery is naïve. There will be pressure to do things a bit more sensibly."

For now, at any rate, broadcast remains a highly important part of video delivery – and this favours HEVC. "So far AV1 has only shown capability for OTT, not broadcast, while HEVC can address both," he says, adding that HEVC is currently present in over two billion devices globally – an addressable market that is a powerful argument for the primacy of the technology.

Broadcast and managed delivery is one thing. Harmonic's Fautier admits that AV1 has an advantage on the open web. "Interoperability with the internet ecosystem, including web browsers and Android/iOS stores for connected devices, is critical. HEVC only works natively with Internet Explorer and Safari while AV1 should be compatible with 100% of the web browsers, as all founders are AOM members," he says. On the other hand, he adds, when it comes to mobile apps, HEVC is supported in both Android and iOS ecosystems.

Future technologies

HEVC and AV1 are not the only next-generation compression technologies available to video distribution companies. The rate of innovation in compression is, if anything, accelerating. The latest MPEG standard and potential HEVC replacement, JEM/H.266, is now on the agenda, the standardisation process having kicked off in October last year.

The latest MPEG meeting in San Diego in April was scheduled to discuss which tools to be included in the standard and, according to Harmonic's Fautier, the industry is on track to achieve a 50% bit-rate improvement compared with HEVC by 2020, something he describes as "a real breakthrough in terms of compression efficiency, especially as it will not only improve on HEVC but also AV1". The AOM meanwhile, is already working on a new version of its codec, AV2.

While H.266 promises great things, its

development could be stymied by the same licensing disputes that have dogged HEVC and, before it, AVC. To avoid this, says Fautier, the video community is discussing the creation of a group outside of the key standards body, ISO/ITU-T, that will "facilitate the selection of technologies to be deployed commercially using H.266 technology". This group, he says, should address licensing issues "at the front end of the standardisation rather than at the back end".

Public broadcasters organisation the European Broadcasting Union (EBU) commissioned the University of Applied Sciences of Wiesbaden to carry out a subjective evaluation of the competing video compression technologies in January. The evaluation included a comparison of the speed of encoding and decoding and was designed help EBU members choose the best codec for their individual needs.

According to Hans Hoffmann, EBU technology and innovation, senior manager media fundamentals and production, the decision to assess rival codecs to HEVC came after it was clear that licensing issues were holding up adoption, even though HEVC is "a fantastic codec".

"The appearance of AV1 is interesting since the players involved have proclaimed it to be 'royalty-free', and if this is true and it meets certain performance requirements it could be interesting," says Hoffman. He adds that, at the very least, the possibility that broadcasters could use an alternative technology could "shake up the market", the inference being that HEVC licensing bodies would be more likely to think again – something that appears to be happening. Hoffman said that initial tests last year were done at a time when the bitstream version of the codec was not yet frozen. "They are now a step further along and we take further steps ourselves. The interest is still there, but it is too early to say what the results will be," he says.

The EBU is also focusing on whether AV1 can realistically be used for real-time encoding applications – something that is obviously crucial for the organisation's broadcaster membership.

"We don't know yet if it could be used for broadcast," he says. While the codec is computationally more intensive that HEVC, this could change over a relatively short time as a result of further innovation.

Hoffman says that the EBU is looking at

Making the most of AVC

While a lot of attention has been focused on the emergence of multiple new compression formats and on the licensing battles surrounding HEVC, AVC/H.264 remains the most widely used standard technology for compression in advanced markets.

With this in mind, technology companies have looked at ways to further optimise AVC, which could obviate the need for an immediate upgrade to HEVC or AV1.

Video compression specialist V-Nova developed Perseus Plus, a version of its Perseus codec that CEO Guido Meardi says can be deployed without the need for new hardware acceleration.

"One of our core assumptions is that with 10 billion video-capable devices in the world and turnaround cycles [slowing], it is going to be difficult to wait, and it is costly to serve different markets with different codecs," he says.

While a Netflix could afford to deploy services using different codecs economically because of its huge scale, for small and medium-sized players this is all but impossible, says Meardi.

"We need a next-generation codec that can lift up the quality of video on every device and web browser with 100% coverage," he says.

Hence the launch of Perseus Plus, which Meardi says distributors can combine with an existing baseline codec – in this case AVC/H.264 – and use existing hardware decoding blocks to decode Perseus Plus. "You can decode this in hardware and have the fallback that if the decoder doesn't know Perseus Plus it can just ignore that element of the stream and still decode the baseline codec," he says.

According to Meardi, Perseus Plus can deliver 1080p HD video at less than 1Mbps with less processing power than AVC.

"By enabling higher quality at lower bit-rates we expand the time of viewing and lower the cost of delivery in terms of marginal CDN cost per minute," he says.

Meardi says that V-Nova has already deployed Perseus Plus with Sky in Italy on 12 year-old set-tops, as well as in a number of other deployments around the world. The company has now developed a second, updated version of the technology, which it debuted at the NAB Show.

Meardi says that Perseus Plus is one of a number of ways in which operators can enhance the capability of existing infrastructure, and claims that it provides "the least expensive bang for your buck" in terms of delivering bandwidth improvements on AVC at multiple bit-rates.

Other companies have also developed technologies that could broadly be perceived as ways of extending the life of AVC, enabling the delivery of more and higher-resolution video services to existing devices. Harmonic's EyeQ 'content-aware' encoding format is also designed to work using a standard AVC codec and is marketed by the company as an optional enhancement for its software-based PURE encoder platform. The technology can be used to optimise variable bit-rate AVC. Harmonic claims that the technology can deliver bandwidth savings of up to 50% on standard AVC.

V-Nova's Meardi adds that other technologies

Meardi: there is a need for a codec that can lift the quality of video on all devices.

such as intelligent caching are also important in delivering bandwidth improvements. "Codecs are important but there are other elements that make a car work aside from the engine," he says.

For Meardi, next-generation codecs are most likely to be deployed for a few specific use cases where the service provider has full control of the decoder, but for the majority of mass-market applications, next-generation technologies are unlikely to gain much traction for at least five years.

"Even though HEVC was standardised in 2012, as of today we still have loads of non-HEVC-enabled devices that are likely to stay in the ecosystem," he says.

With economics driving a slowing down of the frequency with which people swap or upgrade devices, the trend towards a multi-codec world will be even more pronounced.

"The mobile [device] upgrade cycle is now becoming more like the upgrade cycle for TVs," he says. "I don't believe we will see AVC disappearing any time soon."

Q&A: Edwige Dazogbo, Edgy TV

Edwige Dazogbo, founder of Edwige Magazine and Edgy TV, talks about the international expansion of the multi-ethnic themed lifestyle channel.

How do you rate Edgy TV's success since its launch, both in Canada and internationally?

Our multicultural, new media offering has international potential. We saw growth of 200% in terms of our TV viewership following the first launch of the channel on one operator in December – with distribution on three other cable or IPTV operators in Europe, on smart TV in the US and two satellite launches in just three months. There is a demand in Canada and in the international market because of the multicultural themes of the channel.

Through our cooperation with various networks, we have reached some of the major companies worldwide that want to work with us, so we are starting to have success. Furthermore we had a number of mentions highlighting the existence of the channel in the media, and we have worked together with advertising agencies to support sales, as well as adding more and more hours of interesting content to the channel and producing new content in Canada.

What are your goals for the channel this year in international markets?

We want to join together different cultures' diverse ideas of beauty, culture and fashion. We want to create unique content, and we intend to cater to the interests of the multi-ethnic market. The channel allows our advertisers to reach an international community.

This year we aim to launch the channel in the countries we have targeted: the US, Canada, France, Belgium, Luxembourg, Switzerland, Poland, the UK, Germany, Spain, the UAE, China, India, Pakistan, Israel, Tunisia, Benin, Senegal, Cameroon, Congo, Mali, Burkina Faso, Reunion, Mexico, Colombia and Brazil. We also aim to launch sub-brands of Edgy TV: Edgy TV Music, Edgy TV France, Edgy TV India and Edgy TV Africa.

What is your distribution strategy for the channel, in terms of OTT versus affiliation with pay TV operators, and to what extent are you focusing on French-language markets?

We started with cable and IPTV and we want to grow the presence of Edgy TV both online on OTT TV, on IPTV platforms and via apps as well as broadcast on cable pay TV platforms and satellite free-to-air, with a goal of reaching more than 200 millions of viewers in total.

Our strategy is simple and successful. We have a vision and goal to become a major popular channel in the French-language market.

What is the channel's mission and what makes it unique in the female-focused lifestyle space?

The mission is to cover the interests of the multi-ethnic market with a multicultural TV channel that celebrates the diversity of life through lifestyle: glamour, music, fashion and entertainment. It has been created specially for immigrants from Asia, Africa, Latin America and the West Indies, Europe, the Maghreb and the Middle East.

Edgy TV offers a unique original concept and refreshing programming, made purely from dreams and passions. This is content that is rare among TV content providers in the market in countries in Africa, Europe, the Middle East and Asia.

Family and spiritual values underpin the spirit of Edgy TV. We are re-introducing this culture and these values to the world.

What do you see as the ideal balance between global and local content, and to what extent will you seek to localise the channel in international markets?

Our content is the final product of our big international vision, and includes 70% external acquisitions, with the other 30% coming from our own local productions in France, Canada and the US.

There will be general-interest programmes, music video programmes, fashion clips, films from Nollywood, Hollywood and Bollywood and other ethnic-background movies, shows featuring interviews with celebrity guests, and reality shows.

We are addressing a market that is not yet saturated and where there is a strong international demand for multicultural-themed programming. This is a market with a high growth potential in many parts of the world.

Arris's ME-7000: the company believes that AVC will dominate encoding for some time.

HEVC, AV1 and JEM/H.266 together to have "a state-of-the-art comparison" and to work out "if it is worth spending resources to study them further". He is hopeful the organisation will be able to publish a paper and possibly conduct a demonstration at this year's IBC.

Arguing about which next-generation codec to adopt is academic if there is no compelling commercial reason to choose any of them.

Key to any technological shift in video is a killer application that drives innovation. In the case of the existing, widely-used H.264/AVC technology, that application was HD video. The need to fit more bits into existing pipes, combined with the need to upgrade set-top boxes and other equipment to enable HD signals to be delivered, meant that the industry had every incentive to adopt the new technology to replace the less efficient MPEG-2 standard. For HEVC, the homologous application that could drive change is 4K UHD TV. However, demand – and supply – for UHD video has been relatively slow to take off so far.

All new video formats take time to gain the attention of consumers, of course. But in the case of UHD TV, there has been uncertainty about the advantage to consumers in terms of the viewing experience, and uncertainty about the commitment of broadcasters and pay TV providers that are already facing commercial pressure on a number of fronts.

There is now a widespread consensus that the killer ingredient for UHD is HDR rather than higher resolution on its own, but arguments about which HDR formats to support and scepticism about the need to deliver higher resolution video in the first place, given the average size of TVs and the viewing habits of consumers, have contributed to slower than expected deployment of services.

Nevertheless, says Ericsson's Jones, there is now a consensus that "there will be no UHD services without HDR and no HDR services without UHD". He points out that consumer adoption of UHD and HDR-capable TVs is rising and that this will have an impact on expectations about the viewing experience. Moreover, he says, broadcasters will be forced to offer UHD and HDR services because they see that their online competitors are already offering these features.

For Jones, UHD is the key application that can help drive adoption of HEVC. Further down the line, he says, other applications will drive upgrades to H.266, which he does not expect to be ready for mass-market adoption for another five to eight years. "UHD TV will be established by them and that opportunity will have gone, so you have to look at mobility. Everyone is talking about that all the time and at some point [mobile bandwidth] will become such a significant problem that something has to be done – H.266 could be a solution," he says.

"It is fairly unlikely there will be a single winner, as the HEVC installed base will be huge in 2020 when AV1 will only start to kick in."

Thierry Fautier, Harmonic

Beyond mobility, 8K and wider adoption of virtual reality could serve as drivers for adoption of H.266.

While UHD TV will help drive demand for new compression technologies that can help operators save bandwidth, the video distribution world is much more complex now than it was when it shifted from MPEG-2 to AVC, which may have an impact on the speed with which new technology will be adopted, and will certainly have an impact on the complexity of the compression landscape.

Video is now distributed and consumed in many more formats than ever was the case previously, with growth consumption on small mobile screens outpacing other forms of video at the same time as the industry experiments with ever higher resolutions aimed at super-large TV screens.

Add to that the switch from linear to non-linear viewing, driven by SVOD and time-shifted TV – and the accompanying shift to unicast distribution and adaptive bit-rate encoding – and the result is a recipe for lots of different enabling technologies to gain market share simultaneously.

"The emergence of AV1 makes a multi-codec world a reality. As soon as AV1 devices will be available, operators such as Netflix, YouTube and Amazon will have a choice about which codec to use. Netflix has been very vocal about the fact that AV1 would be its codec of choice.

This situation is good for the industry, as AV1 will offer an alternative to HEVC. On the economics side, operators still need to address the HEVC installed base, which will increase encoding and storage costs," says Fautier. "It is fairly unlikely there will be a single winner, as the HEVC installed base will be huge in 2020 when AV1 will only start to kick in. AV1 is being used for unicast delivery, but it will not work for broadcast where only one stream can be sent. In the latter case, HEVC is the only option."

In other words, there is probably a market for all compression technologies, even if some are more equal than others. ●

Rakuten's home cinema revolution

VOD provider Rakuten TV has big plans this year, including possible SVOD launches and an investment in movies to help push the case for getting them on the small screen faster. CEO Jacinto Roca talked exclusively with Stuart Thomson about his plans.

Rakuten TV, the transactional video-on-demand service provider that currently operates in 12 international territories, has big plans to expand its offering, including the launch of a subscription service outside of Spain for the first time and a push to create "the cinema experience at home" through shortening the window between cinema distribution and the appearance of movies on digital platforms.

According to CEO Jacinto Roca, Rakuten TV now has over five million registered users, with about 20% being active in any one year. Revenues are growing by 40% year-on-year, driven by take-up of the service in the UK market, he says. Growth is also strong in Spain, and relatively strong in Germany and France thanks to the presence of its e-commerce giant parent, Rakuten, in those markets. Elsewhere, says Roca, growth is "healthy but slower".

To boost its brand recognition across Europe, Rakuten TV has become sponsor of top Spanish and international football club FC Barcelona.

Roca says that Rakuten TV's distribution strategy is primarily focused on the smart TV market. "Our main focus is strategic partnerships with smart TV brands and telcos," says Roca. "European customers can find us in the recommended sections of smart TV brands and we've seen significant growth from smart TV usage."

This focus on the big TV screen rather than mobile or laptop chimes with Roca's vision of 'the cinema at home'. "Our unique proposition is to create the best cinema experience in the living room," says Roca. To this end, the company has obtained rights to the latest Hollywood releases from the majors, enabling it to deliver what Roca describes as "something unique" in the market. In order to further enhance this proposition, he says Rakuten TV, which has already "invested heavily" in 4K content, is now bringing HDR to the party, initially Samsung Tizen UHD HDR TVs.

While the principal focus has been on movies and transactional VOD, in Spain Rakuten TV also offers a subscription service that brings family content from Disney to its users for a monthly fee.

"We think a family-focused subscription offering combines well with the home cinema proposition," says Roca.

He says that Rakuten TV is now looking at launching versions of the subscription video-on-demand service it currently provides only

Rakuten TV chief Jacinto Roca wants to see movies made avaialble on-demand faster.

in Spain in other markets before the end of this year.

Roca says that the SVOD offering will be "family-focused" and will complement Rakuten TV's core proposition, which is to present itself as "the cinema at home" with a strong movies-on-demand offering.

"We are testing how to combine [SVOD] with the cinema at home," he says. "We are considering a rollout in other territories for 2018, which will complement the cinema-at-home proposition."

The Spanish subscription service is anchored in Rakuten's deal with Disney. Roca says that Rakuten was open to enabling third-party content providers to deliver branded channels on the platform internationally.

"It will have a branded channel concept," says Roca, adding that third-party content partners would "contribute their brand" while benefiting from the Rakuten platform.

Roca says that Rakuten's key vision remains "bringing the cinema experience at home". For this to become a reality, he says there would need to be a shift in the windowing of on-demand rights for Hollywood and other movies.

"We think this will be the next big revolution in content. People don't understand why they need to wait three or four months [to see a movie]," he says. "After one month the only winner is piracy. I see a big opportunity in moving the digital window closer to the cinema window."

Roca cites the example of Korea as a market where this collapsing of windows is already a reality, without an adverse impact on revenues.

In order to push this forwards, Rakuten is co-investing in producing movies that it can then bring to its own platform. The company will invest around €2 million this year in two or three projects that will come to fruition in the second half, according to Roca.

"We are going to co-invest in movie productions to accelerate the creation of this reduced window between cinema and digital," he says. "We can build a case study to show that there is no damage as the distribution window gets closer and that the only loser will be piracy."

While investing in titles makes sense as part of this drive to secure better release windows, Roca is clear that building a movies-on-demand service on the basis of exclusive content rights does not make sense, and draws a distinction between movies and high-end drama series.

"I wouldn't say it makes sense to have movies on an exclusive basis," he says. "Series have multiple seasons and episodes. Movies last two hours and people can watch them and then go to a different service, so I find it difficult to believe that movies will work well in an exclusive window. For us it is more about getting closer to the customer and that is why we have the strategy of teaming up with smart TV manufacturers."

E-commerce giant

Rakuten TV's parent company is a global e-commerce giant with big plans of its own. Rakuten's chairman and CEO Hiroshi 'Mickey' Mikitani used Mobile World Congress in Barcelona in February to unveil a series of initiatives to leverage blockchain technology and content to build "the largest membership community in the world"

Rakuten's messaging app Viber is the company's key content play. It has just launched Viber Community, a chat space within the messaging app. Rakuten claims that Viber has one billion members globally, and it now wants to connect Viber with Rakuten ID, its wider e-commerce identifier, allowing it to promote its services across a wider base.

Rakuten has also launched Rakuten Coin, building on its existing loyalty points programme. The company's aim is for its loyalty points to become a kind of virtual currency that can be exchanged across Rakuten's other properties. The company will leverage blockchain technology to deliver on its vision, according to Mikitani, who said that Rakuten has set the ambition of becoming the largest membership community in the world. It currently has 1.2 billion members and aims to grow this to two billion by 2020. The company's aim is to enhance the supply of internet services, financial technology and digital content with membership, branding and data.

Mikitani said that Rakuten wanted to use social media functionality to help build what he described as "the biggest Grand Bazaar in the world" – a model that differs from that of Amazon in that Rakuten will serve as a shopping mall for a range of merchants rather than as a retail brand in its own right.

The company also aims to enter the Japanese mobile market as an MNO. Mikitani said that owning a network, for an e-commerce or content business, will make sense as a differentiator.

"In Japan Rakuten is market leader and that is a position that we plan to maintain and grow. In Europe and the US we are building our ecosystem," says Roca, citing the company's sponsorship of FC Barcelona in Europe and the Golden State Warriors basketball team in the US as key steps in this journey. "Having a strong brand is the first step in that direction. This is why we have done those sponsorship agreements."

For Roca, video is likely to play a key role in these wider plans – he cites Rakuten's acquisition of exclusive NBA rights in Japan as evidence – but exactly what that role will be has still to be fleshed out.

"We don't yet have a clear model that involves digital content. We know digital content is going to be a relevant block in building this ecosystem, but we have not defined that yet outside Japan," he says.

In the meantime, says Roca, Rakuten TV will focus on developing its "cinema at home" proposition, shortening the release window for VOD and ensuring that the company secures the key new releases in the best video quality available. ●

"While one of the big merits of traditional pay TV was that it delivered predictable cash-flow through recurring subscription revenue, that 'recurring' part is a whole lot less certain in the OTT TV world."

Subs up: broadcasters and the direct-to-consumer world

The rise of subscription video-on-demand and the decline of advertising-based broadcasting is a well-established – and sometimes hotly contested – trend in the media distribution world.

The impact of streaming services on traditional video consumption patterns has been most strongly felt in the US. While over-the-air TV has seen uplift from cord-cutting – as Millennials combine streaming services with good old free TV rather than pay huge cable bills – the bigger story is that changing viewing habits are hitting traditional media.

Broadcasters are not standing still. At the NAB Show in April, Steve Pruett, EVP and chief TV development officer at US local broadcast giant Sinclair said that his group could look to develop its own virtual MVPD platform and ultimately develop a wider SVOD offering to counter emerging challenges to over-the-air broadcasting. Sinclair, which has been building a national platform from which to launch new services, already offers a subscription service around The Tennis Channel. However, the rise of streaming outfits such as DISH Networks' Sling TV has given traditional players such as Sinclair an outline of how the 'skinny bundle' model could be shaped to serve broadcasters' interests.

Speaking alongside Pruett, Drew Marcus, senior advisor at Guggenheim Securities, provided the context: he said that TV station stocks in the US were down 21% this year so far. Entertainment stocks in general were flat, he said. However, broadcast stations were only trading at only 5.7 times free cash-flow, indicating that public markets are concerned about their future.

Subscriptions and direct-to-consumer plays are of course more complex than advertising-supported TV because they involve a direct relationship with consumers who will blame the broadcaster if something they are paying for isn't working properly or if a cancellation of the service isn't properly processed.

Pay TV broadcasters already know about the subscription model, but those with sufficient scale are diversifying into low-cost direct-to-consumer offerings, meaning they too need to manage a direct relationship. Disney recently took the plunge with its launch of ESPN+, its new OTT TV service launched alongside a new version of the ESPN app.

ESPN has of course invested heavily in the technology platform necessary to support its digital offerings through its investment in BAMTech. Other would-be OTT TV entrants among players that traditionally have focused either on advertising, or on selling channels to affiliates, may find the direct relationship more challenging.

They are also pitching their tents in the OTT camp at a time when growth in penetration of SVOD is slowing down. Ampere Analysis recently published research that showed no overall penetration increase of SVOD in the US for four consecutive quarters.

The Ampere research did however find that there is still opportunity for growth through 'service stacking' – the accumulation of multiple, relatively low-cost subscriptions by individual households – as well as room for growth in international markets beyond the US.

According to Ampere, the number of subscriptions per SVOD home the US stands at 2.79, much higher than the nearest European rival Sweden.

While even that US number still leaves room for growth, winning a place on a household's subscription list will prove more challenging the greater the number of services there is to choose from. Netflix and a handful of other services have the marketing power to be perceived as 'must-have' offerings, but services with more marginal appeal are likely to struggle, even if the price point is relatively low. The pay-back threshold could of course be lowered if broadcasters outsource the technical and subscriber management aspects of direct-to-consumer, but they still need to license content in a window that makes sense, or make their own content and potentially forego revenues from selling it on to third-party licensees.

It's also worth remembering that while one of the big merits of traditional pay TV was that it delivered predictable cash-flow through recurring subscription revenue, that 'recurring' part is a whole lot less certain in the OTT TV world. Here, subscriptions can typically be cancelled after a month, rather than after 18 months or two years, and service providers are competing for eyeballs with multiple other providers, rather than one or two alternative pay TV providers.

Which is one reason why, to paraphrase Mark Twain, reports of broadcast's death may be greatly exaggerated. Another speaker at the NAB Show, Lionsgate chairman Kevin Beggs, made the point that broadcast remains "an amazing business" and that, for most of the shows that studios produce, "the broadcast model is the most lucrative".

If that is true for a studio producing scripted content in the self-proclaimed golden age of drama, it is probably also true for broadcasters themselves. Broadcasters know they need to diversify. They know that consumption patterns are changing. But they are unlikely to put all their eggs in the SVOD basket. ●

TV Connect: awards shortlist unveiled

TV Connect is set to take place at London Olympia from May 9-10. Ahead of the event, the organisers have unveiled the shortlist for this year's TV Connect Awards.

The highly-anticipated TV Connect Awards shortlist has been announced. Covering 10 categories, the shortlist showcases pioneering technologies that are utilised across the video landscape and celebrates the personalities behind it with the People's Choice Award.

"We're really excited to unveil this year's awards shortlist as we prepare for TV Connect, one of the biggest events in our calendars," says Jackson Szabo, show manager at TV Connect.

Celebrating the best-of-the-best in the connected entertainment and content delivery industries, the prestigious awards programme embraces forward-thinking ideas and solutions in areas including OTT, AI, content personalisation, immersive video experiences and more. Featuring some of the industry's most cutting-edge visionaries, the shortlisted people, products and companies align with TV Connect's commitment to generating effective change and new ideas industry-wide.

Szabo said: "The video distribution industry has never moved so fast. We're seeing technology become more creative, brave, and dynamic – so it's only right we spotlight those driving change and celebrate them. Congratulations to everyone shortlisted."

Last year's winners celebrate their achievement.

The shortlist has been announced ahead of, TV Connect, which takes place on May 9-10 2018 at Olympia London. The winners will be announced on May 9 at the TV Connect Awards Ceremony at the Millennium Gloucester Hotel in South Kensington, London.

People's Choice Awards:

- Dom Robinson, Director and Creative Firestarter, Streaming Media
- Claire McHugh, CEO, Axonista
- Massimo Bertolotti, Chief Innovation Officer, Sky Italia
- Volker Dietzel, Senior Consultant & Advisor, Divitel
- Bjarne Andre Myklebust, Head of Distribution, NRK
- Irina Gofman, President and CEO, Viasat World

Breakthrough advertising technology:

- Inside Secure
- Appiness NV (Commercial name Spott™)
- SoftAtHome
- Stealth Micro

Leading content discovery and personalisation platform:

- Sri Lanka Telecom Visioncom PVT Ltd
- Think Analytics
- Kaltura

Most innovative in-home device:

- China Telecom Smart Home Operation Center & ZTE Corporation
- M7 Group
- AirTies Wireless Networks
- Netgem Soundbox

Best network optimisation implementation:

- Hughes Systique
- Conviva
- ZTE Corporation
- Qarva

Most cutting-edge encoding solution:

- Bitmovin
- Cisco
- Beamr

Best OTT platform service:

- Intertrust Technologies
- United Cloud
- Simplestream
- BT
- Vewd
- Magine

Best in-class AI use case:

- Bitmovin
- Conviva
- NPAW (NIce People At Work)
- Metaliquid

Best multiscreen service:

- Simplestream
- BT
- CSG
- GoMedia
- Qarva

Excellence in content protection award:

- Intertrust Technologies Corporation
- tivù s.r.l.
- Cleeng

ANGA COM 2018: the preview

ANGA COM takes place at the Köln Messe from June 12-14. Peter Charissé, ANGA COM's managing director, talks to *Digital TV Europe* about the key themes of this year's event.

What will be the main themes of the ANGA COM Conference this year, and how do these reflect current trends in the industry?

In the broadband business the roll-out of gigabit networks remains on the top list. The new German government wants to cover the whole country with Gigabit speed internet by 2025 and plans to put up to €12 billion in a special fund to help supply underserved regions with fibre lines.

In the field of media, streamed content and personalisation still seems to be the most exciting topic. This includes time-shifted TV alongside recommendation engines, big data, multiscreen, OTT and voice control.

The highlight of the international conference programme is the International CTO Panel with Arris, Com Hem, Liberty Global, TDC Group, Tele Columbus and Vodafone. In total, 16 panels in English will focus on DOCSIS 3.1, FTTH, WiFi, OTT, HFC networks, cloud services, multiscreen, European copyright law, big data and TV strategies in Europe, the Middle East and Africa.

What do you expect to be the stand-out features of the exhibition?

With 480 exhibitors, ANGA COM has reached a new record level. Also the rented floor space has been further increased. Besides all the major market players, visitors can expect many new exhibitors, which will enrich our product range. We particularly expect many new products in the field of in-home connectivity, applications and smart home.

"In the field of media, streamed content and personalisation still seems to be the most exciting topic."

Peter Charissé, ANGA COM

What do you see as the main priorities of the cable industry in Germany and internationally this year?

I would like to highlight two strategic questions: How will the time schedule for the gigabit roll-out develop and how will network operators respond to the growing competition from OTT offerings?

The ANGA COM conference: strategy, technology and broadband

Two months ahead of the event, ANGA COM has signed up a record 480 exhibitors from 35 countries. Last year, 19,000 visitors, 50% of whom were international, attended the exhibition and conference for broadband, cable and satellite.

Last year's accompanying conference attracted 2,300 attendees, including 50% international attendees. The conference programme this year features 34 expert panels as well as contributions from more than 170 speakers and moderators.

This year's conference features a new structure and timing. Day one of the strategy conference agenda includes an international CTO panel featuring senior executives from TDC Group, Com Hem, Liberty Global, Vodafone Deutschland, Tele Columbus and Arris as well as sessions on streaming versus broadcast TV and EU copyright law.

Day two of the ANGA COM strategy conference will includes an opening session on addressable TV and big data, featuring contributions from Google, Liberty Global, RTL Germany and others. Other sessions on day two of the event include digital cable switchover and IPTV and non-linear TV for cable and fibre network operators.

Day two of the conference will also include the flagship Broadband and media Summit, featuring contributions from senior executives of Sky Deutschland, ProSiebenSat.1, Vodafone Deutschland, Unitymedia and Deutsche Telekom, as well as sessions on TV strategies in EMEA, and next-generation TV services such as app-based TV, cloud TV, VR and AR. Finally day two will feature sessions covering the broadband, next-generation market and the Internet of Things.

Running alongside the strategy conference will be a technology stream covering OTT, HFC networks, fibre, Full Duplex DOCSIS, cloud services, network migration and other topics.

The final day will be a dedicated broadband day, featuring a keynote from the North-Rhine Westphalia minister of economics, innovation, digitisation and energy Andreas Pinkwart, followed by a range of sessions looking at how Germany can achieve its Gigabit society goals.

CONFERENCE AGENDA STRATEGY

12 June 01:00

International CTO Panel

01:00 – 02:15 p.m. | Room 1

Michael Fränkle Senior Vice President Networks & CTO, TDC Group
Thomas Helbo CTO, Com Hem
Manuel Kohnstamm Senior Vice President and Chief Corporate Affairs Officer, Liberty Global
Dr. Eric Kuisch CTO, Vodafone Deutschland
Bruce McClelland CEO, ARRIS
Ludwig Modra CTO, Tele Columbus

Moderator: Matthias Kurth Executive Chairman and Member of the Executive Committee, Cable Europe

12 June 03:00

Content: TV vs. Streaming – New Content? New Cooperations?*

03:00 – 04:00 p.m. | Room 1

Oliver Berben Managing Board TV, digital Media, Entertainment, Constantin Film AG
Dr. Manuel Cubero Chief Commercial Officer, Vodafone Deutschland
Wolfgang Elsäßer Senior Vice President Business Unit TV, Telekom Deutschland GmbH
Frank Hoffmann Managing Director of Programs at RTL Television
Dr. Christoph Schneider Managing Director, Amazon Prime Video Germany

Moderator: Thomas Lückerath Editor-in-Chief, DWDL.de

12 June 04:30

Media Politics 2018: The North Rhine-Westphalia Summit*

04:30 – 05:45 p.m. | Room 1

Tom Buhrow Director General, WDR
Hans Demmel Chairman of the Board, VPRT e.V. / Managing Director, n-tv Nachrichtenfernsehen GmbH
Nathanael Liminski State Secretary and Head of the State Chancellery of North Rhine-Westphalia
Dr. Wolf Osthaus Member of the Management Board, Unitymedia
Dr. Tobias Schmid Director, State Media Authority NRW

Moderator: Torsten Zarges Chief Reporter, DWDL.de

in cooperation with: vprt Verband Privater Rundfunk und Telemedien e.V.

12 June 04:45

EU Regulatory Update: Copyright Law

04:45 – 05:45 p.m. | Room 3

Viktor Janik Vice President Regulatory Affairs, Unitymedia
Dr. Carrie P. Krogmann Legal Department, ZDF
Dr. Michael Müller Chief Distribution Officer, Legal & Regulatory, ProSiebenSat.1 Media SE
Thomas Roukens Director Regulatory Affairs, Telenet
Jakub Woźny Legal Advisor and Partner, Media Law Firm

Moderator: Caroline van Weede Managing Director, Cable Europe

in cooperation with: Cable Europe

13 June 10:00

Adressable TV: Television in Times of Big Data and Digital Assistants*

10:00 – 11:00 a.m. | Room 3

Keynote: Andre Prahl Chairman, German TV Platform / Head of the Programme Distribution Division, Media Group RTL Germany
Dr. Stefan Arbanowski Director Future Applications and Media, Fraunhofer FOKUS
Michael Burst Media Research Expert XMM, EXARING AG
Dr. Oliver Friedrich Strategic Partner Lead for Broadcasters, Google
Andreas Kösling Managing Director, EL CARTEL MEDIA
John Paul Managing Director, Advanced Advertising and Data, Liberty Global
Thomas Wagner CEO, SevenOne Media

Moderator: Carine Lea Chardon Managing Director, German TV Platform

in cooperation with: DEUTSCHE TV-PLATTFORM

13 June 10:30

Analog, SD and HD – After the Switch-Off is before the Switch-Off?*

10:30 – 11:30 a.m. | Room 1

Wolfgang Breuer CEO, MEDIA BROADCAST GmbH
Gerhard Mack Chief Commercial Operations Officer, Vodafone Deutschland
Dr. Michael Müller Chief Distribution Officer, Legal & Regulatory, ProSiebenSat.1 Media SE
Timo Schneckenburger Managing Director Marketing and Sales, HD PLUS GmbH
Wolfgang Wagner Director Production and Technology, WDR

Moderator: Dr. Jörn Krieger Media Journalist

13 June 11:30

IPTV and Replay Concepts for Cable and Fiber Networks*

11:30 a.m. – 12:30 p.m. | Room 3

Matthias Greve CEO & Founder, ABOX42 GmbH
Christian Heinkele Managing Director, Eviso Germany GmbH, Business Partner of M7 Group SA
Gernot Jaeger Chief Officer B2B TV Solutions, Zattoo International AG
Hans Kühberger Managing Director, Ocilion IPTV Technologies GmbH

Moderator: Ingo Schuchert Managing Director, Deutsche Netzmarketing GmbH

CONFERENCE AGENDA STRATEGY

13 June 01:00

Welcoming Address*

01:00 – 01:15 p.m. | Room 1

Thomas Braun President, ANGA Association of German Cable Operators

13 June 01:15

Broadband and Media Summit*

01:15 – 02:30 p.m. | Room 1

Conrad Albert Group CEO and Group General Counsel, ProSiebenSat.1 Media SE
Dr. Manuel Cubero Chief Commercial Officer, Vodafone Deutschland
Carsten Schmidt CEO, Sky Deutschland
Lutz Schüler CEO, Unitymedia
Dr. Dirk Wössner Member of the Board of Management for Germany, Deutsche Telekom AG

Moderator: Claus Strunz Journalist and Moderator

13 June 02:30

TV Strategies in Europe, Middle East and Africa – Market Update in Cooperation with Broadband TV News

02:30 – 04:00 p.m. | Room 3

Markus Fritz Executive Vice President Commercial Development & Strategic Partnerships, Eutelsat S.A.
Stéphane C. Goebel Vice President Platform Operations, Video Solutions, SES S.A.
Cristian Ionescu Senior Product & Marketing Manager OTT Services, Telekom Romania
Bartosz Kajut CEO & President of the Board, VECTOR TECHNOLOGIES
Yves Padrines Vice President, Global Service Provider EMEAR, Cisco

Moderator: Julian Clover Editor, Broadband TV News / Chris Dziadul Editorial Director and Chief East European Analyst, Broadband TV News

in cooperation with: Broadband TV News

13 June 03:00

NewTV: AppTV, Cloud TV, VR and AR*

03:00 – 04:00 p.m. | Room 1

Nicole Agudo Berbel Chief Distribution Officer & EVP Digital Publishing, ProSieben Sat.1 Media / ProSiebenSat.1 TV Deutschland
Dr. Niklas Brambring CEO, Zattoo International AG
Dr. Marcus Dimpfel Head of Strategy and Business Development, Media Group RTL Germany
Alberto Horta Deputy Managing Director and VP Commercial Development, Discovery Networks Deutschland
Peter Kerckhoff Vice President Content, Telekom Deutschland GmbH

Moderator: Dr. Marcus Englert Associate Partner, Solon Management Consulting GmbH & Co. KG

13 June 04:30

New Cooperations in the Broadband Market – An Interim Result*

04:30 – 05:30 p.m. | Room 1

Uwe Nickl Managing Director, Deutsche Glasfaser Holding GmbH
Johannes Pruchnow Representative of the Board of Management for Broadband Cooperations, Deutsche Telekom AG
Jean-Pascal Roux CSO Housing Industry & Infrastructure, Tele Columbus AG
Theo Weirich Managing Director, wilhem.tel GmbH
Norbert Westfal Spokesperson of the Management Board, EWE TEL GmbH and EWE Vertrieb GmbH

Moderator: Wolfgang Heer Managing Director, BUGLAS Bundesverband Glasfaseranschluss e.V.

in cooperation with: BUGLAS Bundesverband Glasfaseranschluss e.V.

Internet of Things & Industrie 4.0*

04:30 – 05:30 p.m. | Room 3

Keynote: Dr. Klaus Mittelbach CEO, ZVEI – German Electrical and Electronic Manufacturers' Association
Sebastian Ackermann VP / Senior Business Manager Urban Solutions, innogy SE
Jackson Bond Co-Founder & Chief Evangelist, relayr
Dr. Klaus Mittelbach CEO, ZVEI – German Electrical and Electronic Manufacturers' Association
Stephan Schneider Chairman, Digitale Stadt Düsseldorf e.V. / Vodafone Deutschland

Moderator: Prof. Dr. Jochen Vogel Professor for Media Management, Hochschule Macromedia, University of Applied Sciences

in cooperation with: ZVEI Die Elektroindustrie

14 June 10:45

Inhouse Connectivity & Smart Home*

10:45 – 11:45 a.m. | Room 3

Peter Bornschein Director International Sales, Corporate Projects, devolo AG
Martin Czermin Senior Vice President B2B and Housing Industry, Unitymedia
Olav Fritz Manager Sales Provider, AVM
Guido Schwarzfeld Head of Product Management and Marketing Controlling, CC Housing Industry, Telekom Deutschland GmbH
Martin Vesper CEO, digitalSTROM AG

Moderator: Sebastian Artymiak Director Public Affairs, ANGA Association of German Cable Operators

All conference panels in room 1 will be translated simultaneously (German/English). *
All marked conference panels will take place in German.

BROADBAND DAY GIGABIT NOW!

14 June 10:00

Opening – Keynote – Dialogue* — 10:00 – 10:45 a.m. | Room 1

Opening

Tim Brauckmüller Managing Director, Broadband Office of the German Federation
Dr. Peter Charissé Managing Director, ANGA COM / ANGA Association of German Cable Operators
Jürgen Grützner Managing Director, Association of Telecommunications and Value-Added Service Providers (VATM)

Keynote and Dialogue

Prof. Dr. Andreas Pinkwart Minister for Economics, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia

Moderator: **Kerstin Stromberg-Mallmann** Moderator

14 June 10:45

Realizing the Gigabit Society – What can and must Politics do?* — 10:45 – 11:45 a.m. | Room 1

Timm Degenhardt CEO, Tele Columbus AG
Jürgen Grützner Managing Director, Association of Telecommunications and Value-Added Service Providers (VATM)
Dr. Andrea Huber Managing Director, ANGA Association of German Cable Operators
Marcus Isermann Director of Political Interest Representation, Regulation and Federal States, Deutsche Telekom AG
Dr. Tobias Miethaner Head of the Digital Society Directorate-General at the Federal Ministry of Transport and Digital Infrastructure

Moderator: **Kerstin Stromberg-Mallmann** Moderator

14 June 12:00

Network Expansion – Cooperation Models in Practice* — 12:00 – 01:00 p.m. | Room 1

Dorit Bode Spokesperson of the Management Board, M-net Telekommunikations GmbH
Dr. Christoph Clément Member of the Management Board, Vodafone Deutschland
Walter Denk CEO, 1&1 Versatel
Uwe Nickl Managing Director, Deutsche Glasfaser Holding GmbH
Dr. Peter Selgert Director Asset Management, Primevest Capital Partners

Moderator: **Jürgen Grützner** Managing Director, Association of Telecommunications and Value-Added Service Providers (VATM)

New Installation Methods – Booster for Network Expansion?* — 12:00 – 01:00 p.m. | Room 3

Volker Braun Branch Manager Karlsruhe, Leonhard Weiss GmbH & Co. KG
Paul Kempf Association Director, Administration Unit Broadband Coverage County Lörrach
Bernd Thielk Managing Director, willy.tel GmbH
Dr. Stephan Zimmermann CTO, Deutsche Glasfaser Holding GmbH

Moderator: **Tim Brauckmüller** Managing Director, Broadband Office of the German Federation

14 June 01:30

The German "DigiNetzG" Law – Shared Installation, Shared Use, End Consumer Access* — 01:30 – 02:30 p.m. | Room 1

Friedhelm Dommermuth Head of the Department Telecommunications Regulatory Economics, Federal Network Agency
Dr. Stephan Korehnke Head of Regulatory, Vodafone GmbH
Dr. Franziska Löhr Legal Department, wilhelm.tel GmbH
Dr. Mirko Paschke DG 13 - Right of the Digital Infrastructure, Federal Ministry of Transport and Digital Infrastructure
Dr. Claus Wedemeier Head of Division, GdW Bundesverband deutscher Wohnungs- und Immobilienunternehmen e.V.

Moderator: **Dr. Andrea Huber** Managing Director, ANGA Association of German Cable Operators

14 June 02:00

Public Funding vs. Commercial Roll-Out – What is the Impact of the New Legal Framework?* — 02:00 – 03:00 p.m. | Room 3

Dr. Tobias Miethaner Head of the Digital Society Directorate-General at the Federal Ministry of Transport and Digital Infrastructure
Dr. Wolf Osthaus Member of the Management Board, Unitymedia
Wolfram Rinner Managing Director, GasLINE Telekommunikationsnetzgesellschaft deutscher Gasversorgungsunternehmen
David Zimmer Managing Director, inexio Informationstechnologie und Telekommunikation GmbH
Moderator: **Jürgen Grützner** Managing Director, Association of Telecommunications and Value-Added Service Providers (VATM)

14 June 03:00

More Fiber, Less Bureaucracy: Process Optimization for Market Surveys, Biddings and Permits* — 03:00 – 04:00 p.m. | Room 1

Tim Brauckmüller Managing Director, Broadband Office of the German Federation
Stephan Drescher Managing Director, envia TEL GmbH
Timo von Lepel Managing Director, NetCologne Gesellschaft für Telekommunikation mbH
Dr. Kay Ruge Department Head, Deutscher Landkreistag

Moderator: **Kerstin Stromberg-Mallmann** Moderator

BROADBAND DAY GIGABIT NOW! FREE OF CHARGE

The Broadband Day will take place in cooperation with: BUNDES BREITBAND BÜRO, vatm Wettbewerb verbindet

CONFERENCE AGENDA TECHNOLOGY

12 June
11:00

OTT – Next Steps into a New Video Era

11:00 a.m. – 12:30 p.m. | Room 2

Bringing Apps where the Viewers are: Integrating the OTT and TV Experience
Jeroen Ghijsen CEO, Metrological

Managing Virtualized Cloud Broadband and Video Processing in the Headend
Dominique De Paepe Market Director Service Provider, Skyline Communications

Options to Replace Satellite Distribution with B2B Streaming
Ingvar Petrov Business Development Manager, Wilhelm Sihn Jr. GmbH & Co. KG

Best Practice: Cloud-Based Playout – Automation and Self Service as Success Factor
Markus Prahl Vice President Global IT & Network, MX1

Moderator: Wim de Ketelaere CTO, Excentis

HFC Networks – Review and Outlook 2018

11:00 a.m. – 12:30 p.m. | Room 3

Next Generation HFC versus XPON – The Race has just started
Martin Beck VP Sales, DCT Delta

Demand-oriented Expansion – From a Coax to a Fiber Outlet
Holger Weinberg Head of Development & Production Management, braun teleCom GmbH

Managing the HFC Network Migration effectively
Paul-Reimer Paulsen Key Account Manager & Regional Sales Director, Corning Optical Communications

Moderator: Ernst Freese Director Business Development, Teleste GmbH

in cooperation with: ZVEI Die Elektroindustrie

12 June
03:00

Future-proofed Fiber – From the Headend to the Terminal

03:00 – 04:15 p.m. | Room 2

Lessons Learned from the Field with Virtual CCAP and Remote PHY
Asaf Matatyaou Vice President Solutions and Product Management, Cable Edge Business, Harmonic
Anders Bloom Senior Systems Manager Broadband, HFC Development, Com Hem

Lessons Learned from Fiber Deep Implementations
John Knox Principal Solutions Architect for Cable Access, Casa Systems

Future Proofing Cable Optical Access Network for Universal Services
Dr. L. Alberto Campos Fellow, Cable Labs

The ONT is Dead – New Developments in Fiber Terminals
Dr. Gerd Thiedemann Head of Product Management, AVM

Moderator: Mike Thornton FSCTE, Training Chair, Society for Broadband Professionals

in cooperation with: SCTE

12 June
04:30

FDX – Status Report and Migration Paths

04:30 – 05:45 p.m. | Room 2

Full Duplex DOCSIS 3.1
John T. Chapman Fellow and CTO for the Cable Access Business Unit, Cisco Systems, Inc.

More than Speed: Unlock New Opportunities with Full Duplex DOCSIS 3.1
Guy Ray Strategist Connected Home Division, Intel

Migration from Analog to Digital DWDM Optics in Remote PHY Backhauling
Dr. Gerhard David Director Product Management, BKtel communications GmbH

Virtual Segmentation Solution: Future of PHY Deployment
Erinc Karatoprak Product Manager, Technetix BV

Moderator: Chris Bastian Senior Vice President and CTO, ISBE

in cooperation with: ISBE

13 June
10:00

Cloud Services and Network Virtualization

10:00 – 11:15 a.m. | Room 2

Cloud Native Network Function Virtualization
Alon Bernstein Distinguished Engineer, Cisco Systems, Inc.

Operational Efficiency, Flexibility and a better Customer Experience via a Microservices Architecture
Clive Malcher SVP, Commercial, Piksel

Virtualization for Any App, Any Network, Any Screen
Ronald Brockmann CTO, ActiveVideo

Cloud-based managed Business Services for SME: Leveraging SDN/NFV and Virtual CPE
Ajay Manuja VP of Engineering, Benu Networks

Moderator: Alan Breznick Cable/Video Practice Leader, Light Reading

13 June
11:45

DOCSIS®3.1 and DAA – Network Migration

11:45 a.m. – 01:00 p.m. | Room 2

DOCSIS Field Report Unitymedia with Gigabit Services
Lothar Stadelmeier Senior Architect, Access Strategy, Liberty Global

Migration Strategies for Attractive Upstream Peak Rates
Ayham Al-Banna Ph.D., Engineering Fellow, CTO Office – Network Solutions, ARRIS

Different Use Cases: Deployment Options for Distributed Access Architectures
Luis Martins Head of Cable Access, EMEAR, Cisco Systems, Inc.

Virtualized Distributed Access Architectures – Cable Access made to Measure
Mike Gannon Lead Systems Engineer, Nokia

Moderator: Reik Elftmann Director Network Strategy, Unitymedia

13 June
01:30

Next Generation Multiscreen Platforms

01:30 – 02:30 p.m. | Room 2

Building a SaaS-based Cloud Video Platform – Sharing Lessons Learned
Mike McKeown Director Business Development, Cisco Systems, Inc.

Agility, Innovation and predictable Costs – Key Value Drivers for Pay TV Operators adopting Cloud-based SaaS Video
Michael McCluskey VP, Product Management, Espial

Integrating Android TV into the Pay TV Experience – A Case Study Approach
Mark Evensen CTO, Amino Communications

Take Back Control of your OTT Service
Petr Peterka CTO, Verimatrix

Moderator: Dr. Helmut Stein Chairman PCM, DVB Project

CONFERENCE AGENDA TECHNOLOGY

13 June 03:00

Big Data – Potentials and Value

03:00 – 04:15 p.m. | Room 2

Big Data in a DOCSIS 3.1 World
Brady Volpe President and CEO, The Volpe Firm and Nimble This

Using the Cloud for Managing and Analyzing Big Data securely
Rainer Kellerhals Industry Lead Media & Cable EMEA, Microsoft Deutschland GmbH

Real-Time Visibility & Analytics to enable Actionable Intelligence & Network Automation
Roland Thienpont Product Marketing Manager, Nokia

Driving Value from Big Data in Practice
Jelle Tadema Sr. Director, European Sales, Guavus
Philipp Gröne Customer Experience, Head of Project Management, Unitymedia

Moderator: Hansjörg Pätz Managing Director, HSB Media GmbH

13 June 04:45

DOCSIS®3.1 – New Network Options

04:45 – 06:00 p.m. | Room 2

Kick Off: Interference Mitigation in a DOCSIS 3.x Environment
Dr.-Ing. Jörg Zastrau HF Engineer, Network Engineering, Vodafone Kabel Deutschland GmbH

DOCSIS 3.1: Utilizing Traditional Analog DWDM Transport
Paul Whittlesey Senior Director, Business Development, ATX Networks

A Converged, Multi-Service "Mid-Mile" Aggregation Network for Cable
Andrew Smith DSE and Chief Architect for Cable, Juniper

Challenges of Video Delivery in a Distributed Architecture
Arttu Purmonen Vice President, Teleste

DOCSIS 3.1 is Becoming Reality – Practical Considerations
Tim Kroll Product Management, AVM

Moderator: Dr.-Ing. Jörg Zastrau HF Engineer, Network Engineering, Vodafone Kabel Deutschland GmbH

14 June 10:00

FTTH – The High-Speed Data Deployment

10:00 – 11:15 a.m. | Room 2

Addressing the Diverse Deployment Challenges of Gigabit Broadband for Multi-Dwelling Units (MDUs)
Kurt Raaflaub Head of Strategic Solutions Marketing, ADTRAN

99.99 % Availability Ultra-Broadband FTTx/H – Plan and Practice
Dr. Yates Yao Founder and CEO of LUSTER LightTech Group, LUSTER Teraband Photonics

Fiber-to-the-Building (FTTB) and X-to-the-Unit
Michael Emmendorfer Vice President, Systems Engineering and Architecture, ARRIS

Deploying a Fiber Deep Network at the Speed of Light
Kevin Bourg Optical Network Architect, Corning Optical Communications

Moderator: Paulo Valente Technology Director, Cable Europe

14 June 11:30

WiFi – Use Cases, Coverage and User Experience

11:30 a.m. – 12:30 p.m. | Room 2

Is WiFi Connectivity sufficient for all Challenges in the HAN (Home Area Network)?
Dr. Sebastian Groß Director Business Development, Unitymedia

WiFi Coverage using Existing Coax Network Infrastructures
Torben Flodgaard Kristensen Group Product Manager, Triax

Fueling a Smarter Home Experience
Laszlo Gyalog Product Marketing Manager, Nokia

Managing the WiFi Experience to Deliver Revenue and Enhance Security
Michael DiGiorgio Director of Product Management – WiFi, Casa Systems

Moderator: Thomas Küpper Scientific & Technical Program Officer, EU Commission

14 June 01:00

SDN and NFV – Enabling Fixed and Mobile Convergence

01:00 – 02:15 p.m. | Room 2

DOCSIS SDN Platform Development
Bartlomiej Lewicz Access Network Innvovation System & Solutions Architect, Liberty Global Operations B.V.

Using Virtualized Management/Orchestration to Make RPHY Deployments "Kinderleicht"
Chris Busch Engineering Fellow – CTO Networks, ARRIS

Delivering Fixed and Mobile Convergence Solutions with a Common Software Platform
Peter Wolff Manager – Solutions Architecture Group, Casa Systems

Differentiating SD-WAN Business Services with Virtualized Network Orchestration
Dr. Tim Gyselings IP Sales Engineer, Nokia

Moderator: Volker Belz Partner, Goldmedia

14. Juni 02:30

FTTH Networks – Best Practice for End to End Deployment

02:30 – 03:30 p.m. | Room 2

The Massive FTTx Rollout in Europe demands New Solutions and Methods
Peter Lo Curzio Product Manager Fiber Access Network Systems and FTTH, Hexatronic

FTTx Solutions on Demand towards Gigabit Broadband Connectivity
Jan Schindler Market Intelligence Director Telecom Business, Prysmian Group

Curbtrenching, another Way of Micro-Trenching
Uffe Mogensen CEO, GM Plast

High-Performance In-Home Networks with Smart WiFi for Cost-Effective Retrofitting of Existing Buildings
Paul Ens Head of Business Unit, gabonet

Moderator: Dr. Wolfgang Endemann Chairman ITG FA 3.3, TU Dortmund

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Technology in focus

Infrastructure equipment and product news for digital media distribution

Ericsson Media Solutions will 'continue to grow'

Ericsson Media Solutions' three constituent product areas – compression, delivery and platforms – can all continue to deliver growth following completion of the acquisition of a majority stake in the business by One Equity Partners, according to company executives.

Following completion of the current 'carve out' process, One Equity Partners will be the 51% owner of the business, with Ericsson retaining a 49% stake.

"We should be through that process by the end of the year. We will have a new name and a new brand but will retain our relationship with Ericsson," Mark Russell, CTO and head of strategy, told *DTVE* at the NAB Show.

Ericsson Media Solutions will comprise Ericsson's compression assets, media delivery including 2014 acquisition Fabrix Systems and the TV platform business comprising MediaRoom MediaFirst and other assets.

"It covers everything from acquisition to contribution to distribution. We have a pretty broad presence in the space," said Russell.

He said that uncertainty about the future of the business ahead of the January deal had "some impact" commercially, but added that Ericsson had engaged with customers to inform them about what was happening.

"We have engaged with all of our customers and kept them apprised and updated," he said.

"Our customers were appreciative that we did things openly during the process. Our conversations with them have been quite positive."

Russell said that in broad terms, both vendors and customers were consolidating as the media business undergoes rapid transformation wrought by changing viewing patterns and technology development. "The gravitational forces are towards consolidation."

At the technology level, he said that there is a broad transformation of media workflows towards a primarily OTT all-streams approach.

"OTT is not a sidecar. It is the main thing. All of those workflows are being remapped around that and we want to play big in that space. We have underlying assets that we will employ and we'll look at other avenues to fill the portfolio out."

While there is a transition to cloud based delivery, he said, larger operators are likely to build a streaming TV service but maintain a managed aspect to that service.

Channel 4 orders Grenfell Tower VR original

Channel 4 has commissioned its first virtual reality original from VR studio Parable, named *Grenfell: Our Home*, as the studio moves to TV. *Grenfell* will be an immersive documentary that tells the stories of survivors of the Grenfell Tower fire, focusing on their lives and homes before the fire.

The piece will premiere at Sheffield Doc/Fest with a general release to follow this summer. 59 Productions are designing and creating the animation for the film and the music comes from Biggi Hilmars. Meanwhile, Parable has also signed an exclusive first-look deal with distributor All3media International.

The move underpins Parable's strategy to expand the business into TV and brand content. The three-year agreement will see All3Media partnering with Parable as it builds its factual and factual entertainment TV slate.

Ceire Clark, senior acquisitions executive at All3Media International, said: "We're very pleased to partner with the team at Parable TV in this significant three-year deal.

"The company has already achieved huge success with its ambitious VR and 360 content, building successful relationships with key broadcasters, and we are thrilled to be partnering with them on their linear slate."

In Brief

BBC HDR first on iPlayer

The BBC has streamed its first live event in UHD and HDR on BBC iPlayer Beta. The broadcast took place in April and was a live-stream of a Rugby League match between the York City Knights and Catalans Dragons. The BBC, used Hybrid Log-Gamma (HLG) for the broadcast, a type of HDR that was developed by BBC R&D and Japanese broadcaster NHK. All the BBC's previous UHD efforts have focused around on-demand content.

Anevia seals Keepixo

OTT and IPTV software provider Anevia has sealed its acquisition of Grenoble-based compression specialist Keepixo after holders of over three quarters of its shares approved the deal at the company's AGM. Keepixo specialises in the development of video compression software for TV operators to enable live or near-live broadcasts for multiscreen TV. The company has about 150 customers worldwide, including 40 tier one operators, according to Anevia. In 2017, Keepixo recorded sales of €0.9m and had 14 employees. Anevia initially announced the acquisition of Keepixo in March and said the move would allow it to offer operators and broadcasters an end-to-end encoding, transcoding, storage, packaging and delivery solution that will meet new quality standards like 4K HDR and HEVC.

In Brief

Movistar+ on Amazon stick

Telefónica's Movistar+ TV service is now available on the Amazon Fire TV Stick following the integration of the Movistar+ app on the device. Users of Amazon Fire TV Sticks can view the channels to which they subscribe, and content on-demand including movies, series, kids shows, documentaries and other programmes. Amazon Fire TV Stick owners with Movistar+ subscriptions will be able to download the Movistar+ app from the Amazon and Fire TV Stick stores, after which they will be able to view content by entering their username and password on the app. Separately, online video service Dailymotion is now also available as an OTT app on the Amazon Fire TV and Fire Stick TV devices. The rollout follows Dailymotion's launch on the Apple TV, Android TV and Xbox One platforms.

Xite and SpotX team up

Personalised music channel provider Xite has tapped ad technology provider SpotX to offer programmatic advertising to media buyers. Xite users can search for videos, create their own music channel, watch curated channels and like or skip videos, delivering data about preferences via Dutch cable operator Ziggo's interactive set-tops. The resulting algorithms are then used by SpotX to build audience segments for targeted, personalised adverts, measurement of audience engagement and audience-based buying on linear TV. In the Netherlands this is possible because the interactive product is available through the linear channel on the Ziggo set-top box.

Imagine Communications splits business in two

Imagine Communications is splitting its business into two organisations encompassing playout and networking and advertising technology respectively. The ownership of the company will remain as before and recently appointed Tom Cotney will continue to serve as CEO of both businesses.

Steve Reynolds, president, playout and networking solutions and previously CTO, will take charge of the playout arm. Sarah Foss, SVP and general manager, ad tech, will lead ad technology.

"Internally we pretty much operate that way anyway," said Paula Bargery, sales director, UKISA at Imagine, speaking to *DTVE* at the NAB Show. "This is just formalising that. It will take effect immediately. We see both businesses have different challenges. Ad tech is in expansion mode and we are looking at filling gaps in our portfolio through acquisitions."

Cotney: will continue to be CEO of both businesses.

She said that the new ad tech business is going to include traditional products and Imagine's OTT line including non-linear ad insertion and packaging. Previously there was an advertising management solutions business and the OTT business was managed separately.

Non-linear advertising is "the key area prompting RFPs, not only in terms of rights management across multiple different distribution channels and scheduling, but customers on the ad side want to be able to blend those things and spend across linear and non-linear and put together linear and non-linear mixed schedules," said Bargery.

She said while non-linear is growing it is not yet generating huge revenues, meaning that broadcasters are looking for low-risk entry strategies.

"There is a balance between making the investment and not seeing an immediate return. Adding [non-linear] to the linear platform makes it less risky and less costly to do it."

The Landmark airtime sales system has been complemented by non-linear functionality so that people can manage everything in the same system.

Wind Hellas launches TV service with Zappware

Greek alternative telco Wind Hellas has launched its planned multi-screen TV service, Wind Vision, using technology provider Zappware's turnkey service.

The Android TV-based service – the first such offering in Greece – includes access to Netflix as well as domestic and international channels. Wind Vision comprises about 60 international channels as well as domestic TV services and premium sports offering Nova Sport. Wind Vision provides two packages – a family pack without sports for €9.90 and a full package including premium sports for €24.90.

The service is available to all Wind Hellas fixed-line subscribers. The company has about 600,000 fixed customers.

The hybrid Android/Android TV receiver also includes a DVB-T/T2 tuner enabling viewers to access over the air programmes.

"Our end-users will now be able to enjoy a unique TV experience. A smooth integration of all available content in a state-of-the-art video solution is now available on all screens with Wind Vision. Users are now one click away from their favourite channel, sports game or Netflix Series. Wind Vision serves set top boxes and mobile devices in Greece from Zappware's cloud-based back-office. We are excited to enrich our current offer with this advanced entertainment service, the first in Greece with Android TV and Netflix. We now look forward to growing our business with our new attractive household propositions," said Hermann Riedl, chief strategy and digital transformation officer of Wind Hellas.

"Zappware was able to leverage some great opportunities that new technologies offer: first, in this deployment for Wind, we are combining DVB and OTT in one hybrid Android TV box. Second, by using Android TV, the integration of third party content from e.g. Netflix and YouTube is done in an efficient way, resulting in a great user experience. Third, our Amazon AWS based cloud back-office serves the Android TV boxes as well as the mobile devices with Wind's new multiscreen TV service. This is a very scalable, flexible and future-proof architecture," said Patrick Vos, CEO of Zappware.

MIPTV: VR lacking sufficient high-quality content

Virtual reality success won't happen overnight with the market still lacking a high volume of high-quality content, delegates at MIPTV heard in April. On a panel titled 'True VR: gearing up for an interactive watching experience', VR industry insiders addressed a range of issues surrounding this new medium, including the hype cycle around virtual reality and the potential business models that underpin it.

Jonathan Flesher, corporate vice president of business development at Baobab Studios – the VR animation studio founded by *Madagascar* director Eric Darnell – likened the current state of the virtual reality market to the early days of radio or television.

"I think we're the victims of our own modern media," he said. "If you remember back when radio launched and when television first launched, it was literally a few hours of content per day. You had to tune in during specific hours.

"It [virtual reality] is a brand new video platform that's launching and we have to wait for that body of content to be developed, so it really is as much of a headset adoption problem as it is a content [problem]."

Speaking on the same panel, Alina Mikhaleva, co-founder and managing partner at Spherica VR Studio, said: "We need to kill the hype a little bit and to understand that VR is a completely new medium. It's not going to happen overnight."

Mikhaleva argued that the nascent industry needs to create "way more" high quality content, contrasting the current state of the VR market to a service like Netflix, which adds films and series on a weekly basis. "Maybe you have a big [VR] announcement once a month, but how can we expect our audience to go there daily if there's nothing to watch?"

Christina Engebak, CEO of Europe for The Dream VR – a producer and distributer of VR and 360º content via the Dream VR app – said that while there is a lot of opportunity, the key is to get big brands on board.

On the topic of business models, Mikhaleva said that Spherica is working as a studio for clients in order to finance its own original VR content, which it plans to monetise directly with its audience.

Flesher said that Baobob is currently giving away its content for free, because the drop-off in viewership that would result from charging for it at this stage makes it not worth it.

K5 invests in blockchain-based monetisation firm

Film production and financing company K5 Media Group has invested in White Rabbit, a firm that aims to use blockchain technology to change how viewers pay to access films and TV series.

White Rabbit is a browser plugin that recognises content being streamed peer-to-peer and allows fans to pay the rightsholder directly, without needing to pay for multiple streaming subscriptions.

K5 co-founder Daniel Baur will join the White Rabbit Advisory Board and provide access to K5's library of more than 50 films, growing White Rabbit's global content library.

"I have been actively searching the blockchain space for over a year, looking for companies that can have a massive impact on the film industry," said Baur. "With White Rabbit, I saw a product that properly integrates blockchain and embraces the existing entertainment industry and fans in a unique way."

Film producer Alan Milligan founded White Rabbit in 2017 in an effort to solve "the failing business model of digital distribution of film and television" and to make content legally accessible to everyone.

White Rabbit works using a blockchain-powered token system. The company is currently taking pre-sale applicants for its token sale, with plans to issue its minimum viable product in the second quarter of 2018.

"We´re disrupting the new studios' closed server subscription model, to the benefit of producers, talent, investors and fans - ensuring fair access for films and series, competition in streaming services and diversity of content," said Milligan.

K5 is behind films like *Paterson*, a Jim Jarmusch-directed drama that was co-financed and produced by Amazon, and *ANON*, a Clive Owen-starring film that is due to premiere Worldwide on Netflix in May.

K5 International, a division of K5 Media Group, made the financial investment. Terms of the deal were not disclosed.

In Brief

Netia partners with ADB on latest generation gateway

Polish service provider Netia has partnered with video delivery specialist ADB to deploy its VV 5822 gateway. The platform is equipped with ADB's Epicentro software and is designed to offer high-performance multimedia and high-speed internet. ADB's VV 5822 gateway series features high-speed networking through 4 Gigabit Ethernet ports and dual radio 802.11ac/n WiFi. It also supports advanced IP-based telephony services.

Nagra launches new digital cinema service

Content security and TV technology specialist Nagra is launching myCinema, a new service aimed at delivering content to cinemas in partnership with owners. The service will be headed up by Jean-Luc Jezouin, a former Alcatel-Lucent and Nortel executive who is now SVP of digital TV sales development at Nagra. Jezouin will be supported by former, Google, Youtube and Widevine executive Glenn Morten, VP at Nagra and member of the board of the University of Southern California's Entertainment Technology Centre, who will look after strategy and solutions, and Bruce Eisner, president of Los Angeles-based Digital Advisors and former Dish Network and CinemaNow executive, who will be in charge of content acquisition. Other members of the team include Darcy Lorincz, formerly of AerNow, Accenture and the BBC, who will look after sports and eSports, and Reza Ackbaraly, co-founder of Quincy Jones' Qwest TV, in charge of music and the arts.

In Brief

Strategy Analytics: mobile essential for live TV services

Mobile screens are "essential for live TV services" thanks to improved displays, faster mobile connection speeds and more generous data plans, according to research outffit Strategy Analytics. In a research report, the firm said that smartphones should be prioritised as an alternative screen to consume live TV services – not just a device for accessing content 'on the go.' The report comes after US online TV service Sling TV announced in February it now has 2.21 million subscribers, more than any other dedicated live streaming service in the US, according to Strategy Analytics, with DirecTV Now the closest rival at 1.2 million subscribers. Strategy Analytics said that the user experience will be important in determining future growth, with services like Hulu and YouTube – which now also offer live TV streaming services in the US – benefitting from having popular mobile apps. "Sling TV is losing to a much bigger competitor, Hulu, mainly because of Hulu's SVOD catalogue and history," said Chris Dodge, Strategy Analytics' associate director of user experience strategies. "What really helps to drive mobile usage from YouTube, Hulu, and to a lesser extent DirecTV, are their existing dedicated mobile apps." Chris Schreiner, Strategy Analytics' director of syndicated research said: "DirecTV built their new live TV streaming app outside of their pre-existing popular app. Building from within like Hulu will be key for live TV services to generate a stronger mobile presence and ramp up their subscriber base."

Samsung launches episodic VR 'pilot season'

Samsung has launched an initiative called Pilot Season, which is designed to encourage the development of episodic virtual reality content for the Samsung VR Video service.

Pilot episodes for six original series have now gone live on the Samsung VR Video service on Gear VR, with the content produced using grants provided by Samsung.

The Gear VR headset maker also offered the indie filmmakers the chance to use its 360 Round camera as part of the scheme. Samsung launched the camera in October and it uses 17 lenses to capture 3D and VR content.

Samsung said Pilot Season builds on its efforts to expand VR content offerings and drive growth within the independent VR filmmaker community.

The content includes: design series *&Design* by Sibling Rivalry and Curious Octopus; Sigmund Freud-inspired *The Interpretation of Dreams* by Graham Sack and Sensorium; and futuristic adventure saga *Lightcatcher* by Occupied VR and RSA VR;

Others are: virtual Easter egg hunt *Sam's Surreal Gems* by RSA VR and Hey Wonderful; and *Voyages – Pilot*, a VR animation that takes viewers from birth to death by Kaleidoscope.

British virtual reality studio Breaking Fourth provided the sixth pilot for a series called *Bro Bots*. The first six-minute episode, entitled Bro Bots Go Sky High, premiered during the 2018 Tribeca Film Festival as part of Samsung's VR Video's Pilot Season. *Bro Bots* takes place in a futuristic New York City and follows two British police robots, unlikely best friends Otis and Roberto, as they solve crimes for the NYPD. Three additional episodes of *Bro Bots* are in production and will be released on the Samsung VR Video service in the coming months. "We're thrilled to be part of Samsung's VR Video Pilot Season. VR continues to push the boundaries of the way viewers can engage with content and we're proud to be at the forefront of this medium," said David Kaskel, the CEO and founder of Breaking Fourth.

Conviva: Apple TV leads as streaming grows

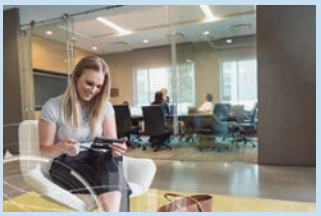
Growth in viewing time on Apple TV devices in the first quarter of this year outpaced all other devices by almost two times, according to data analytics outfit Conviva's All-Screen Census Report Q1 2018.

According to statistics from Conviva's customer base, Apple TV saw a 709% increase in viewing hours year-on-year in Q1.

During the same period, viewing on Roku devices grew by 87%, while its share of total viewing time dropped by 3%.

Apple TV accounted for 5.4% of all hours viewed, still some way behind Roku's 23.1%. Amazon Fire TV, which accounted for 5.7% of hours viewed, saw year-on-year growth of 411%.

Overall, viewing hours of internet-delivered video across mobile, connected TVs and desktop screens grew by 114% in



the first quarter over the same period last year, with the total number of viewing hours reaching close to five billion.

That figure compares with 12.6 billion hours recorded for all devices over the entire course of 2017, as measured by Conviva's 2017 OTT Streaming Market Year in Review report published in January.

While Apple TV outpaced other devices in terms of viewing hours, for mobile viewing Android grew two and a half times faster than iOS devices, according to the report. Android viewing hours increased by 243% to account for 16.5% of total hours viewed, while iOS hours viewed increased by 80% to account for 11.3%.

App-based plays in general grew four times faster than browser-based viewing oin PCs, with the number of viewing hours on apps growing 136% year-on-year.

Conviva found that North America continued to drive growth in internet streaming viewing in the quarter, reporting 174% growth in viewing hours.

Conviva's report noted an improvement in the quality of the streaming experience. The proportion of videos that failed to start in Q1 2018 was 2.34%, less than half the figure for the same period last year.

Average bit-rates in Q1 2018 reached 4Mbps across all devices, a 29% improvement on the same period last year.

On the move

Magyar Telekom has named **Tibor Rékasi** as its CEO following the resignation of previous chief executive **Christopher Mattheisen**. Mattheisen will leave the company on July 1. He had served as CEO since 2006. Rékasi has served as chief commercial officer, residential services at Magyar Telekom since January last year, having previously served as chief sales officer and, from 2013 CEO of T-Systems Hungary. Magyar Telekom has also named **Melinda Szabó** as Rékasi's successor as chief commercial officer.

AsiaSat CEO **Andrew Jordan** has resigned and has been replaced by **Roger Tong** (*pictured*). Jordan, who has been CEO for a year and a half, will serve as senior adviser to the Hong Kong-based satellite operator until October 31. Prior to becoming CEO, Tong was VP, engineering and operations and chief technical officer of AsiaSat.

Vevo's chief technical officer, **Alex Nunes**, has left the company, marking the music video firm's latest big executive departure. Nunes' exit comes after Vevo CEO **Erik Huggers** stepped down in December. Head of product Mark Hall followed early this year, leaving to become vice-president of product and strategy at Bandcamp. Nunes, like Huggers, is a former BBC staffer, having held a number of roles at the company, including head of media services – a role that saw him work on the iPlayer between 2008 and 2010. After this Nunes worked at YouView and then at social TV app Beamly – a service that was first known as Zeebox before it was rebranded. He joined Vevo in 2015.

Nordic Entertainment Group – the renamed and soon-to-be split-off broadcasting arm of Modern Times Group (MTG) – has named its new management team under CEO **Anders Jensen** (*pictured*). Current CEO of MTG Denmark **Kim Poder** will become EVP and group chief commercial officer and CEO, Denmark for Nordic Entertainment Group. **Matthew Hooper**, currently MTG EVP and group head of corporate communications, becomes EVP, group head of corporate affairs and CEO, UK with immediate effect, responsible for the management of MTG's and subsequently Nordic Entertainment Group's UK based operations. MTG chief strategy officer **Gabriel Catrina** will be Nordic Entertainment Group's EVP, group chief strategy officer and head of M&A, while **Jakob Mejlhede**, MTG EVP and head of programming and content development, will become the company's EVP and group head of content. **Morten Mogensen** will remain as CEO of production outfit Nice Entertainment Group, while **Alexander Bastin** remains head of streaming services Viaplay and Viafree. MTG SVP and head of technology for Viaplay and Viafree **Kaj af Kleen** meanwhile becomes SVP and group CTO and product officer for Nordic Entertainment as a whole. MTG Denmark head of sport **Kim Mikkelsen** will become SVP and group head of sport. **Peter Nørrelund**, current MTG Sport CEO, will remain with the new Modern Times Group but will serve as an advisor to Jensen at the same time. At the country level, current MTG Norway CEO **Morten Aass** becomes SVP and CEO, Norway for Nordic Entertainment Group while Viasat Finland CEO **Mathias Norback** becomes SVP, CEO, Finland. Current MTG Sweden chief **Filippa Wallestam** has already been named as SVP and CEO of Nordic Entertainment Group Sweden.

Set-top and TV technology provider Amino has named **Jamie Mackinlay** as its new global VP of marketing. Mackinlay was formerly SVP of sales, marketing and business development at ADB Global, having previously also worked for Paywizard, Orbital Software Group and O2.

Vincent Bolloré has stepped down as Vivendi chairman and handed over the reins to his son **Yannick** (*pictured*). Vivendi's supervisory board unanimously voted Yannick Bolloré as the new group chairman following the company's shareholder meeting. Vincent Bolloré, who is 67, had earlier stepped down as Canal+ Group chairman in favour of **Jean-Christophe Thiery**, triggering a senior management mini-shuffle that saw CEO **Maxime Saada** take over Thiery's former role as president of the company's directorate. Bolloré will remain on the board of Vivendi. Yannick Bolloré is chairman and CEO of advertising giant Havas Group, having previously founded the media division of the Bolloré family investment vehicle Bolloré Group in 2006. Vivendi acquired Bolloré Group's majority stake in Havas last July, bringing about the union of the two and fulfilling a long-held ambition of Vincent Bolloré.

BT Sport has appointed EE mobile video and content chief **Matt Stagg** as director of mobile strategy in a move that highlights the growing importance of mobile video to the pay TV provider. Stagg, who will report to BT Sport COO Jamie Hindlaugh, will be responsible for developing the pay TV broadcaster's mobile capabilities. He will continue to head EE's strategy for delivering 4G and 5G networks for the media and broadcast industries.

Brightcove has appointed **Jeff Ray**, the former chief executive of education software company Ellucian, as its CEO. Ray succeeds acting CEO **Andy Feinberg**, who has led the company since the departure of David Mendels last summer. Feinberg will now revert back to his role as president and chief operating officer. Ray was most recently at Ellucian and before that was at software provider Ventyx.

Please email contributions to: stuart.thomson@knect365.com

"Today's winning strategy, for all platforms, is to offer something eye-catching. As the pressure to stand out grows, telcos and regional online platforms are looking at adding premium drama to their offerings."

Telcos join the drama club

It's just over a quarter of a century since Bruce Springsteen's song *57 Channels and Nothin' On* was a huge hit. A lot has changed in TV since then.

Today there is a surfeit of good TV and in particular a lot of premium episodic drama, thanks to competition from Netflix and others. In 2017, 500 scripted shows aired in the US, up from 455 in 2016, according to a study by FX Network. There is an episodic drama arms race taking place and it doesn't look to be slowing down.

Today's winning strategy, for all platforms, is to offer something eye-catching. As the pressure to stand out grows, telcos and regional online platforms are looking at adding premium drama to their offerings. One high-profile project to the help these players compete in the episodic arena is Atrium TV, the 'commissioning club' that celebrated the first anniversary of its launch this month.

"In almost every market around the world the number three player is the telco and we saw that as an opportunity because they all are competing with Netflix and the local TV channels and they need something to stand out," says Jeremy Fox, chairman of Atrium, which is owned by Modern Times Group-owned distributor DRG.

Atrium offers its 20 club members, including Orange in France, Scandinavia's Viaplay, Telefónica in Spain, Germany's Deutsche Telekom and BT in the UK, a first-look at premium, multi-episode dramas it develops.

It's a novel approach: the members only pay for the shows they opt to buy. Atrium shouldered all the development costs across the scripts that club members greenlit last October. Two projects are in the works: *Quasimodo*, written by *Life of Mars* co-creator Ashley Pharaoh; and Stephen Kronish's moon-landing series *One Giant Leap*.

Atrium's members are not obliged to "buy" into the projects but the club needs to put up 60% of the budget for the projects to proceed, says Fox with budgets ranging from US$5 million to US$10 million per episode.

Atrium's model is unique. A similar scheme put forward by Hollywood agents CAA was based on its members putting in money upfront. Electus also recently launched a consortium to co-produce unscripted content with a similar ambition, to lower the costs for regional players to get access to high-value content. Members of 6/26 include France's TF1, Germany's Nitro, part of the RTL Group, and Modern Times Group, the owner of DRG, Atrium's owner.

The rising costs and competition for talent has spurred a lot of this activity, along with the desire of media companies to get into the direct-to-consumer game. MTG's Viaplay will produce 12 episodic drama series this year and Jacob Andersen , group head of programing and content development, thinks there is an appetite to double that in the next two years. "The traction we get with subscribers is amazing with original content," he says. But with the "radical changes in the business," he adds, content production costs have risen by an average of 30% over the last two years.

For telcos, accustomed to recurring revenue streams, taking risks on content is difficult. Commissioning clubs like Atrium can spread the risk, but some telcos have taken the plunge on their own. Telefónica has, separately from its involvement in Atrium, committed to producing 11 original dramas this year under its Movistar brand, six of which have already been made, including the €10 million Alberto Rodriguez period drama *La Peste* and post nuclear disaster thriller *La Zona*, already sold to Starz in the US.

The Movistar originals were the most watched content on the platform, according to Domingo Corral, Telefónica's head of original content, and are part of the group's commitment to spend €70 million per year this year and next on original content.

"We are very pleased with the results of our investment in the first year," says Corral. "You cannot buy local content because there is competition from the broadcasters so you have to develop it yourself and then it can have your own flavour."

The shows are intended for an SVOD platform, and Corral says he can take more risks because different shows can appeal to different audiences. "I have a lot of respect for Netflix and Amazon. They do what they do very well and when you have competitors like this, they encourage you to be better," he says. "I'm glad they are spending money to hire local talent as well."

We'll have to see what the audience data says about the first Atrium shows, but the products will add to choice and give the club's backers a way to stand out against not only local competitors but also the global platforms. Given that Netflix is commissioning more local productions, including 10 European projects such as a football-themed drama from *Downton Abbey* writer Julian Fellowes and a comedy series by Idris Elba, there is a lot to play for. An updated title for Bruce's ballad could be *57 Channels and Plenty On*. ●

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