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IABM – Platinum Members

Change. Innovate. Adapt.

Peter White
CEO, IABM

Welcome to the IBC 2019 edition of the IABM Journal. Change, Innovate and Adapt is the theme for this year's Annual International Business Conference which is taking place in London in early December.

As IBC 2019 opens for business these three words should be at the forefront of our minds; our industry is well into its transformation to an on-demand, IP-delivered, cloud-enabled structure where efficiency and scale make a real difference. Our future success depends upon driving organizational and business change successfully, innovating with transformative products and services, and adapting to agile operations and as-a-service business models. In short, completely transforming every aspect of our businesses.

We are carrying these messages forward strongly with all our activities at IBC. The show-opening IABM State of the Industry breakfast session – 'Seeing clearly in the cloud – strategies for business transformation' – looks at what's driving industry change and how both IABM members and visitors to the show can meet the challenges and unlock the opportunities in our fast-changing industry. It also provides the first of many excellent networking opportunities IABM is providing throughout the show.

The Future Trends Theatre – which IABM is again curating – returns with twice as many presentations across a huge range of leading-edge topics, and many IABM members are taking advantage of presentation opportunities to share their ideas with the widest possible audience.

This year's BaM Awards®@IBC has attracted a record of nearly 200 entries, and the BaM Awards® Party on Saturday will recognize outstanding innovation across the entire BaM Content Chain®. As well as celebrating that innovation, the party also provides more excellent networking opportunities.

Talking of the BaM Content Chain®, in the 15 months since we launched it to give the industry a modern working model, we are now seeing it being widely accepted and adopted across the industry. Indeed, IBC itself is framing the new Conference Tracks this year around our BaM Content Chain® segments across all five days of the event. We have had a similar welcome to our most recent initiative – the IABM Technology & Trends Roadmap™, and I now expect this to become a blueprint to frame technology discussions between our members and their customers, short-circuiting what has previously been an onerous business – sharing and comparing roadmaps.

'Manage' is one of the most lively segments of the BaM Content Chain® as broadcast and media companies search for more efficiency and agility in their media factories. So it is appropriate that our Special Feature this month is on developments in Manage, and there are some excellent insights in it from member companies who are leading the way in transforming media management and workflow orchestration to power the new media factories.

In July we announced the results of the election to the new Members' Board, which will serve for two years under the chairmanship of Andreas Hilmer of Lawo. Andreas has laid out his vision for how he sees IABM developing in that period in an article in this edition, and we also hear from outgoing chair, James Gilbert of Pixel Power (who remains on the Board as Immediate Past Chair), reflecting on what has changed over the course of his four years as chair.

There are too many other interesting features in this edition for me to single out – but I am sure you will enjoy reading them and gain useful insights. I must however make a special mention for John Ive's lightning tour of innovation in each segment of the BaM Content Chain®, and I share his conclusion – that the future is bright! All we need to do is to continue to change, innovate and adapt – and then keep repeating the process!

I wish all members a successful IBC Show and I look forward to meeting up with as many of you as possible during the show – and at various other IABM events that follow – including Conference in December!

Peter White
CEO, IABM

New Members' Board Directors elected for 2019-2021

Peter White
CEO, IABM

Every two years, all IABM members are asked to vote for people and companies to become directors on the Members' Board of IABM to represent their interests and shape the future of the association; IABM is owned by its members, and the board is both made up of members and voted for by members. In July we announced the results of this year's election for a new Members' Board to serve a two-year term to July 2021.

The Board plays a central role in all the association's activities:
it is responsible for the overall strategy of IABM, and setting, reviewing and changing as necessary the policies of the association, which are then implemented by the IABM Team. The Members' Board also exercises overall financial control.

The membership of the new IABM Members' Board reflects the international make up of IABM's membership; the newly elected members are:

Dr Jörg Pohlman – ARRI
Anne-Louise Buick – Avid
Nicolas Bourdon – EVS
Tim Shoulders – Grass Valley
David Phillips – Multicast Consultancy
Geir Bryn-Jensen – Nevion
Bea Alonso – Dalet
Alison Pavitt – Pebble Beach
Peter Sykes – Sony
Juergen Sommer – Vitec Group

The newly elected members join five continuing members (elected by the outgoing board for continuity), who are:

Andreas Hilmer – Lawo (Chair)
James Gilbert – Pixel Power (Immediate Past Chair)
Nicki Fisher – Clear-Com
Glodina Connan-Lostanlen – Imagine Communications
Anna Lockwood – Telstra

In addition, the chairs of the APAC, EMEA and Americas IABM Regional Members' Councils – **Dennis Breckenridge** of Elevate Broadcast, **Ole Clausen** of Danmon Group and **Paul Stechly** of Applied Electronics respectively – also have seats on the Board. Vice Chair **Graham Pitman**, IABM CEO **Peter White** and Finance Director **Lucinda Meek** complete the line-up.

Newly elected Chair of the IABM Members' Board, **Andreas Hilmer** from Lawo, said, "Our industry is facing challenges from various sides and is encouraged to think outside the box almost daily. Never before in my 16 years working for broadcast manufacturers have I seen such a burst of activity and creativity despite the disruptive changes facing manufacturers, service providers and broadcasters. Helping to steer our industry through these turbulent times will be the mission of this newly elected board and IABM's wonderful in-house team. We will continue to maintain the right balance between vendors' interests, who founded this organization, and the broadcast and media industry at large. Sustainable success is based on trusted partnerships; IABM plays a crucial role in this process to ensure that all stakeholders benefit from the vast opportunities that lie before us."

"The Members' Board is absolutely central to the ongoing success of IABM, and I am delighted that it once again includes a broad cross section of company sizes and sectors, with nominated representatives who are all hugely experienced and widely respected in the industry," said Peter White, IABM CEO. "With this great new Board now in place, I'm looking forward to tapping into its knowledge and ideas to help take IABM to the next level and deliver even more value and support to all our members."

"That we have again had so many nominations this time around demonstrates how much our members value their association," added Lucinda Meek, IABM Finance Director, who oversees Members' Board activities together with those of the Regional Members' Councils. "I am excited that we will be able to draw on the abilities of so many highly talented people on the new Board; the future at IABM looks bright indeed."

Here are some reactions from members of the new IABM Members' Board:

Dr Jörg Pohlman, ARRI: "I would like to thank everybody participating in the vote and reelecting me to the IABM Members' Board. I will be very happy to contribute intimate knowledge of the industry as well as ARRI's 100+ years of experience. Together with fellow board members, I will try to ensure that IABM manages to stay ahead of the curve and remains the leading international organization driving the broadcast and media industry forward."

Anne-Louise Buick, Avid: "After 20 years working for manufacturers and vendors to the broadcast media technology industry, I'm delighted to join the IABM Board and contribute to the fantastic work the organization does to connect and support members globally. The broadcast technology vendor community is one about which I am passionate, and IABM offers an effective platform for its collective voice, representing member interests across trade initiatives, customer segments and industry alliances. I am excited to represent Avid and to have the opportunity to add value to that mandate."

Nicki Fisher, Clear-Com: "I look forward to continuing my work initiated over the past four years as an IABM board member. Throughout this time, we have broadened our reach with representation from large, small companies and start-ups, across multiple geographies and with greater diversity than ever before. This scope has created many more ideas, initiatives and opportunities to support IABM members in an ever-evolving market and I look forward to continuing this work to ensure our membership good value and a strong networking community."

David Phillips, Multicast Consultancy: "I'm delighted to have been elected to the IABM Members' Board and, being a smaller SME, able to add to the diversity of business size that IABM will have in its board structure. I would like to use my extensive network of contacts and experience of operating in a global market to help further build membership of IABM. I'm particularly interested in start-ups and newer businesses learning about and recognizing the benefits that membership of IABM brings. I'd also like to further support the recent successful initiative of IABM in facilitating the matching of members' products and services to the ever-changing needs of our clients."

Geir Bryn-Jensen, Nevion: "As we know, the broadcast industry has been undergoing a fundamental and very disruptive change that is affecting the whole value chain, from broadcasters and service providers to suppliers. IABM plays a key role in helping its members navigate through that change. I look forward to leveraging my own experience of radically transforming Nevion's business from being a provider of hardware products to one of software-defined solutions, to support the IABM in its important mission."

Bea Alonso, Dalet: "There is no doubt that IABM provides excellent value to our industry, both for solution providers and media companies worldwide, through its research, reports and events, so having the opportunity to help build policy and priorities as part of the board is a hugely exciting prospect."

Alison Pavitt, Pebble Beach Systems: "The IABM plays a key role in supporting the many and varied organisations that make up this fantastic industry of ours, and I look forward to continuing as a board member as it evolves to meet the new challenges and opportunities facing us all."

Juergen Sommer, Vitec Group: "Working in the broadcast industry for over 17 years, I have respected the work of the IABM as a positive influence shaping and evolving the broadcast market. Having spent my 'broadcast working-life' in product management, sales and marketing, encountering a wide-range of content creation products from the Vitec Group brands, I hope my experience will bring valuable insight as a board member. IABM is the only association that truly represents the global broadcast and media technology industry. Right now, as the broadcast industry experiences a period of exciting change and innovation the role of the IABM has never been more important. Joining the board and helping to shape the future of our industry is a great honour for me and a duty I look forward to fulfilling."

Regional Members' Councils... looking to
further broaden the scope and activities of
these over the next two years

Getting members more engaged

An interview with Andreas Hilmer – the new chair of the IABM Members' Board

Andreas Hilmer
*Chair of the
Board, IABM*

As reported elsewhere in this edition of the Journal, a new Members' Board was elected in July by IABM members. Andreas Hilmer of Lawo is the new Chair of the Board. We spoke to him about his career in the industry and how he sees IABM developing under his watch.

After leaving university, I studied marketing and PR and started working as a consultant in a boutique agency with some well-known brands on their books, including Patek Philippe, McDonald's and BBC World. I became the go-to person for high tech accounts; I'm not an engineer but I have the ability to talk to engineers and understand what they're talking about and I enjoy communicating this to potential customers and the wider industry.

In 2004, I jumped the fence to the client side to join Riedel. I found being able to concentrate fully on just one 'account' much more satisfying. I left Riedel after nine happy years to join Lawo as Director of Marketing and Communications in 2013.

I then joined the IABM Board representing Lawo when the company was elected to the Members' Board in 2017. My mission was to achieve a greater degree of visibility; not all of the organization is readily apparent to its members – how it is governed and what level of influence every member has.

As Chair, I will continue this work – getting members more engaged in IABM processes will pay off for everyone. The whole organization will become more powerful and effective if we promote and achieve active member engagement. Currently, to really know about what IABM does, you have to be an active seeker of the information. If members understood more about how it runs and everything it can do for them, they would engage more.

The formation of Regional Members' Councils has been a good step in this direction, and I will be looking to further broaden the scope and activities of these over the next two years.

The bottom line is finding the right balance between the interests of the members – who form IABM – and the industry at large: broadcasters, networks, service suppliers etc. We need to cater to both groups to keep the industry prosperous. This will also help make IABM stronger by increasing income across a wider range of sources. IABM has the opportunity to become the 'agent' for this industry – to represent it on all levels globally.

I believe in partnerships – they are the basis for sustainable success, balancing the interests of vendors and the wider industry. Partnerships ensure that all stakeholders benefit from opportunities and face challenges together. Indeed, sustainable success is based on trusted partnerships; IABM plays a crucial role in this process to ensure that all stakeholders benefit from the vast opportunities that lie before us. But we can do even more.

On a personal level, I will continue not to be shy and say what I think! I don't believe in revolution – evolution is more healthy. On the technology front, I would contend that IP is just a stepping stone to Broadcast 3.0! It's about creating and controlling systems in combination with IP and software defined architectures – with floating resources allocated to specific productions. The real revolution is in automated workflows.

What will look different at the end of my term as chair of the IABM Board in 2021? I'm at the knowledge gaining stage at the moment – I've got a lot to learn, but achieving more visibility into the organization for its members and increasing the influence of IABM as the leader in the industry will be high on the list – showing everything the organization has to offer by upping our approach to member engagement. That way, everyone wins.

Broadmedia & Entertainment

Inter BEE 2019

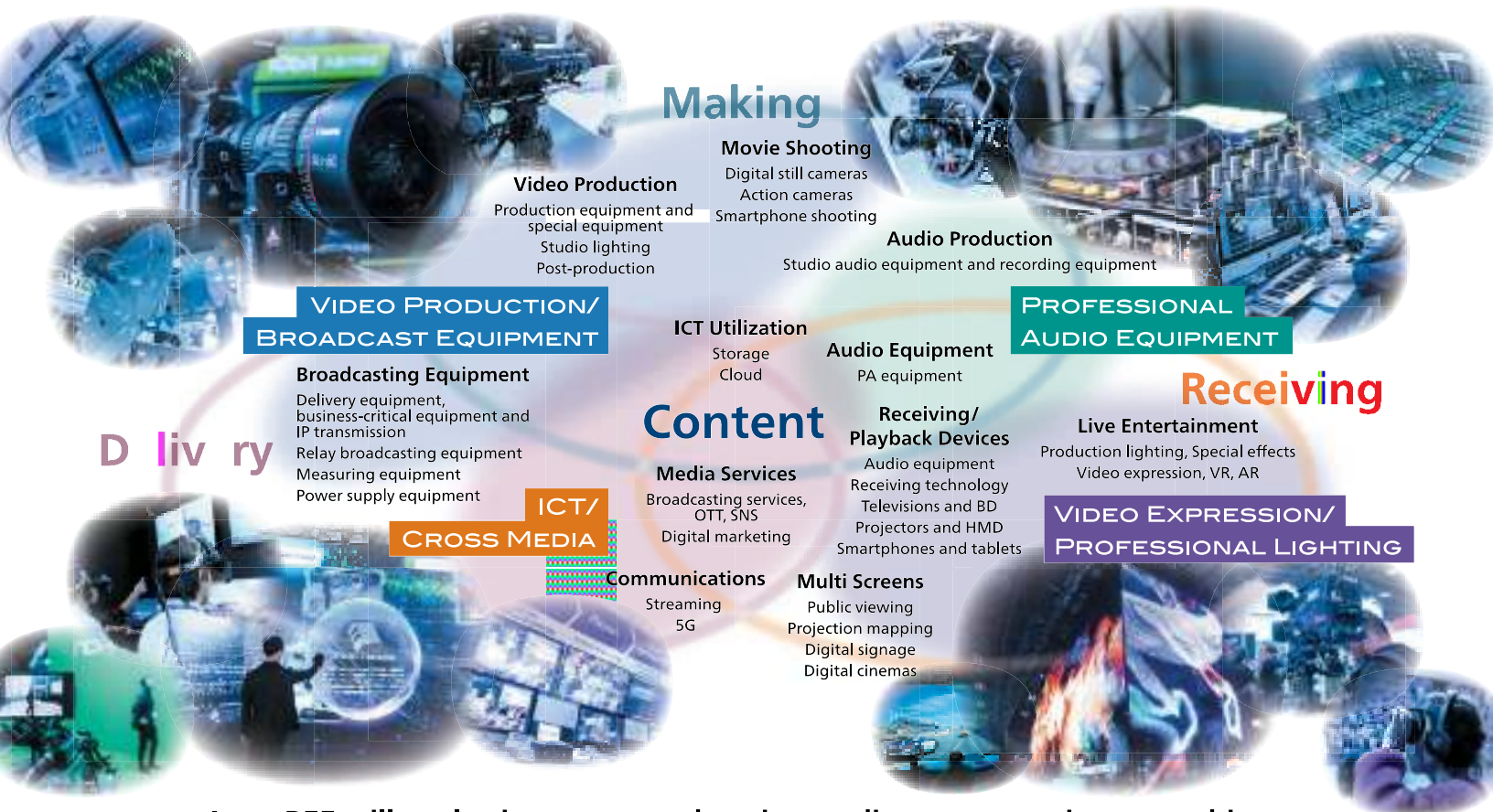## November 13-15 | Makuhari Messe, Tokyo

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All about IBC 2019

Mike Crimp
CEO, IBC

With just a few days to go until more than 55,000 attendees from 150 countries arrive in Amsterdam to experience the latest innovations that are revolutionising the media, entertainment and tech industries we caught up with Michael Crimp, Chief Executive Officer, IBC on what we can expect from the world's most influential media, entertainment and technology show.

What are the top two reasons to be at IBC2019?

Number one is networking. IBC is above all a place to share knowledge and experience, whether that is on the show floor, in the conference rooms, or in the cafés and bars of the RAI and across Amsterdam.

My second reason would be to do deals. Whether you are a media company looking to find a better way to engage with your audiences or a vendor with fresh ideas for technological solutions, I hope you find the best way to grow and move forward.

What is new or different at IBC2019?

As always, the IBC team has worked hard to keep abreast of developments in the industry, and the innovations we introduce are, as always, driven by what our visitors want.

So we have brought the IBC conference and exhibition back into alignment, instead of starting and finishing the conference a day earlier.

This year we have taken a major step forward by adding two new honours to our popular and prestigious IBC Awards programme. We will be honouring a Young Pioneer, and significant projects in social responsibility.

For the first time there will be an eSports Showcase featuring top level debates and discussions, and of course the chance to see what it is all about, with a real, live, here on stage contest between the national champions of Germany and Spain playing Counter-Strike.

We're also reprising the Future Trends Theatre, which proved to be a great success with visitors when we introduced it last year. IABM is once again curating it and this year's programme has twice as many presentations looking at what's coming to our industry next – and further over the horizon too. The Future Trends Theatre program is running right through from Saturday to Tuesday.

The final very important innovation I would point to is the Media-Telecom Convergence Catalyst, an exciting new collaboration between IBC and the TM Forum. We will see three unique catalyst projects on the show floor, showcasing open innovation between the telecoms and media industries. Participation from Al Jazeera, Associated Press, BBC R&D, RTÉ and more will show how 5G, AI and big data management can solve business and technology challenges, and improve the customer experience.

What is new for the IBC2019 conference?

As ever, the conference looks at contemporary issues from a creative, commercial and technical viewpoint, allowing our visitors to form a fully rounded view and take part in the debate about the future of the industry. This year, each day has its own theme based around the IABM's BaM Content Chain®:

- Friday is **Create and Produce: creating disruption**, which includes a look at new technologies including immersive experiences and beyond 4k resolutions

- Saturday sees **Manage: automating media supply chains**, which looks at how emerging technologies like blockchain and AI can transform the media business

- on Sunday we will look at **Publish: embracing the platform revolution** and how the move towards new business models is disrupting the industry

- Monday's theme is **Consume: engaging consumer experiences**, and in particular what is going to engage

- Tuesday is **Monetise: scaling audiences and revenues**, looking at how brands can lead to new models of advertising

The lounge talks programme – more informal chats about key topics – will be back, too, looking at topics which are harder to fit into the formal programme. That includes corporate social responsibility and inclusion, too.

Something that's not new, but following on from the successful introduction last year, we are bringing back the IBC Global Gamechangers Stage again this year. This hosts the biggest business, creative, technical, news and future facing talent making waves around the world, to talk about what is going to change the game for us in the media industry. Gary Shapiro, president and CEO of the Consumer Technology Association; Jane Turton the CEO of All3Media; and Lisa Opie, director of factual for BBC Studios are just a few of the names you will see on the global gamechanger stage this year.

Why have you added an eSports showcase, and how will this add to the overall IBC experience?

The answer is quite simple: eSports tournaments have rapidly risen to become major global media events, calling for comprehensive coverage and with a unique set of technical and editorial challenges. Where else would you go to understand the issues and possibilities than IBC?

We have always taken the view that you need to see something to understand it, so we have always strived to make the IBC conference experiential. A dry debate without appreciating the extraordinary excitement of eSports would be very dull.

So as well as conference sessions – which include the participation of the players emerging from the world of eSports like Ginx TV, Twitch, Riot and Blizzard, as well as developers like EA Sports – we will host a live demonstration. Two professional teams from ESL's National Championships in Germany and Spain will go head-to-head on Counter-Strike.

This is going to be an extraordinary afternoon, so we are hosting this in the RAI Auditorium, our largest space, which we will be kitting out with all the technology an eSports championship demands. Everyone is welcome, and we anticipate a big audience.

What do you hope attendees take away from IBC2019?

Everyone comes to IBC with their own set of goals, so my first wish is that they achieve them, whether that is in researching technologies and solutions, or in buying or selling.

I have no qualms at all in saying I hope that people go away with new business opportunities and ideas. Business genuinely gets done at IBC – deals are signed on the show floor. That is very good for our exhibitors, of course, but good too for buyers, who have had the opportunity to compare solutions from all the leading vendors around the world, in one convenient showcase.

I hope too that attendees go home equipped with shared knowledge and experience, which will help them drive their own businesses forward in the year ahead. What they see at IBC should energise and motivate them, and reveal new opportunities – for their businesses and as individuals.

IBC is about networking, about sharing knowledge and experiences. So I hope that everyone goes home with more entries in their address book: more contacts for business and for advice and encouragement.

What are the technical trends you expect to see at IBC2019?

We will certainly see more developments in Ultra HD – 8k as well as 4k, with the Japanese launch of consumer Super Hi-Vision channels ahead of next year's Tokyo Olympics. As well as resolution, that means growing interest in HDR.

The march from bespoke hardware connected by SDI towards software applications running on standard IT kit and connected by IP is well advanced. These applications enable the key challenges, like delivering to multiple platforms quickly and efficiently.

On top of these software-defined architectures we will see major developments in AI and machine learning, again aimed at managing the massive amount of content we now generate, and delivering it to the audience that will enjoy it, whether they know about it or not.

Monetisation is the final part of the chain. Media businesses can only create, curate and deliver content if they make a fair return on their investment, so expect to see new ways of optimising, tracking and collecting revenues. This is such a key issue it gets its own full day in the IBC Conference.

What are you most excited about IBC2019?

My answer is the same as it has been for many years now. All our plans and efforts have gone into developing an experience – exhibition, conference, networking opportunities and special events – that works for our visitors. It is no boast to say that IBC is the world's leading forum for the media entertainment industry. What excites me is the prospect of delivering on our plans, and once again seeing IBC as the global meeting point.

The media industry today

Four years ago, when I took up the chair of the IABM's Members' Board, I was asked in these pages for my view of the future. This is what I said:

We are not going to solve all of the challenges of the IP transition in two years!

I would also hope to set the IABM membership on a long-term path to address the skills crisis. We have to find a way of reaching young people in schools to make them realise that this is a vibrant and fascinating industry. They need to be studying the right subjects so they can get into the right universities – good broadcast engineering courses exist producing graduates which are snapped up, but they cannot get enough people to apply.

Now, as I hand over to Andreas Hilmer, I can look at our world and say that those challenges still remain – but that is what makes it an exciting place to work.

The rate of change in the industry is accelerating. Some would say that IP is driving it, but in truth that was always over-hyped, and is today still a work in progress before we get to the plug and play simplicity of SDI.

What is transforming the industry is the move from bespoke hardware to software-defined solutions using standard computers. From there, we can easily virtualize the software, which brings enormous efficiencies.

And then, if you really insist, we can talk about the cloud. In truth, public cloud implementation is the ultimate demonstration of virtualization. In the public cloud you cannot cheat – you need to conform to the game rules of that environment. The second clear trend over my time in the chair is another accelerating rate of change towards consolidation in the industry. Declaration of interest here: my own company, Pixel Power, was acquired by Rohde & Schwarz in November 2018.

Our industry, for all its excitement, remains small on the global scale. The total market for broadcast equipment is about the same as the R&D budgets of an Apple or an Intel. The scale means that it struggles to support siloed companies – to succeed you need to have some weight behind you.

Mergers and acquisitions continue to make headlines. That is not to say that the industry is practically shrinking: the number of exhibitors at IBC has remained more or less constant for years. As the mid-sized businesses either combine or are acquired by the larger enterprises, so new companies come in at the bottom, often bringing remarkably innovative ideas and concepts. This is great for keeping the industry alive.

But if you are considering a merger or acquisition, then the key message is that you have to find the right partner. There has to be a good fit between the two businesses – that generally means no overlap in product offerings or you will spend all your management time in trying to bring overlapping product lines together.

A bad fit is inherently bad for the customer. It means products are discontinued or dramatically altered, particularly when there were competing product lines in the two companies.

A bad fit, perhaps one driven solely by economics, means discontinuity of people, too. Losing staff – either from the back room or the front line – is again unsettling to customers.

I think we all agree that one of the joys of our industry is that it is very people driven, and that strong relationships are central to

buying and selling. If you lose those relationships – and that includes the ability for sales and marketing to feed ideas through to development and support – then you are on the downward slope.

You might expect me to say this, but I think we got it right when we chose our partner, Rohde & Schwarz. It has the scale and the weight to provide a strengthening presence, but it does not compete with us at the product level.

Our goal at Pixel Power remains the same as it always was – to develop world-leading products. We have expanded our horizons to encompass playout and automation, and within the larger company we have the resources to deliver excellence. But Pixel Power has not changed as a business. We still have the same staff – we are actually expanding – and we provide the same development, support and sales effort from the same offices in Cambridge.

"If you are considering a merger or acquisition... there has to be a good fit between the two businesses... no overlap in product offerings or you will spend all your management time in trying to bring overlapping product lines together."

I think we have achieved a good fit in our merger process. I am very happy to talk to any other members about our experience, and how to drive good value for a business and its customers.

The final point I talked about four years ago remains a great concern. Not to put too fine a point on it, there is little shrinkage in the amount of grey hair in the industry.

There have been some major and welcome shifts. Efforts to increase diversity have borne fruit, and there are many more women in the industry, for example.

But as a whole, we really are not getting any younger. This is an industry which has a

James Gilbert
CEO Pixel Power and outgoing chair of IABM Members' Board of Directors

great future – but only if we can persuade young people to come in and continue to innovate.

The IABM has undertaken some good work here, like the student bursaries and awards. But we all need to do much more. We have to find ways to make the industry more appealing, so we can compete for staff against Google or Facebook.

We need young people to talk the right talk – and sell the appeal of our industry to other young people.

But really: if you could work on Game of Thrones or Line of Duty or the Premier League – or develop the technology for these productions – why on earth would anyone want to work in any other industry?

My thoughts for the next four years? Headlines would be:

- IP will still be in transition, with SDI still very much around and, in many places, still dominant

- there will be a greater understanding of what the cloud really can enable for broadcasting and media

- vendor consolidation will continue, but there will still be new companies coming to join us bringing bright ideas and younger talent

And one final thought. I am writing this as we prepare for several important customer demonstrations around the globe. As we move from dedicated hardware, which you had to physically see, touch and feel, software products are different and are ideal for remote demonstration and collaboration. With the need and desire to reduce our carbon footprints, online conferencing and maybe even virtual reality could begin to replace a proportion of the industry's international business travel for certain types of demonstration. Major events are already evolving to become more targeted, networking-led exchanges of knowledge and experience. Perhaps we will begin to see other benefits of moving to software defined solutions above and beyond those directly in front of us.

IABM GLOSSARY OF TERMS

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Let's Help to Keep News Factual

Stan Moote
CTO, IABM

This topic may seem strange coming from a CTO, however in my job at IABM I am constantly looking at and understanding various trends to help assist our industry with growth opportunities.

Regrettably fake-news has become a significant growth opportunity for many outside our typical industry. Beyond the usual suspects – whether from national, regional, local or social outlets – for the reader to know what is real or not is becoming more and more problematic.

No question that networking everywhere has changed how we get our news; for that matter, how we get our entertainment too. Think about it – we have news and sports feeds and alerts. Our social circles are now a combination of 'real' friends and like-minded people with similar interests who forward or re-tweet items of interest. The question is, is that content real or simply spectacular entertainment?

Hollywood has always done a great job with the statement 'based on a true story' followed with a statement like 'Incidents, characters and timelines may have been changed for dramatic purposes. Certain characters may be composites, or entirely fictitious.' No doubt some of this verbiage has to do with managing the legal aspect. I suppose when we watch movies or read books, we mentally 'assume'

parts are real and other parts are glorified for the purposes of entertainment and to enhance the messaging portrayed by the storyline.

Circling back to news, research reports continually state that people trust local news more. Perhaps this is because they have a bond with the local talent? No question local news states true facts that are not to be questioned. For example, the winner of a horse race or game scores are factual information. The same goes for game and athlete statistics. Facts are facts – albeit the interpretation could be open to discussion. My point is sport is based on factual data. When a controversial referee call happens, technology comes to the rescue with multicam angles and slow-mo to assist with the final ruling.

Whether we consider social media a friend or enemy, our influence as an industry is small. Software can now generate life-like news clips on virtually any topic, bots get the topic trending on social media and instantly it can go viral. The hope is that savvy viewers will question the reality and go to traditional sources for authentication. What we can do is help

ensure that traditional news sources and outlets are solid, not providing misinformation and as immune from hacking as possible. This way the public is assured they are 'trusted'.

As newsrooms call on technology from almost all sides of our industry, this is where IABM members can make a difference. I spoke with Mike Palmer, CTO at Masstech Innovations. Mike has over 30 years' experience working directly with newsrooms and while employed with AP he worked to develop MOS protocol to tie disparate systems together.

Essentially this was the singular technology that enabled integration of multiple media types (video, stills, graphics, audio) from multiple media devices built by multiple manufacturers. Without it, integration of the newsroom tools – newsroom computer systems, video servers, character generators, still stores, weather systems, production switchers and audio consoles – could not have spanned vendors. MOS is pretty much deployed in every newsroom worldwide. Mike said the MOS Protocol Group, one of IABM's ICGs (industry certified groups), has

been focused on security and most recently has updated the protocol to secure communication to ensure control messages and content exchanged between systems aren't hacked. Asking Mike that while this helps within the newsroom but what about outside, he replied, "The fundamental problem with gathering news content from third parties is that in the age of social media it's hard to work out who to trust. Journalists have been operating on the premise of transitive trust for more than 200 years (if I trust the wire service, and the wire service trusts the stringer, then I will trust the stringer, or mathematically if a=b and b=c then a=c). This works when the universe of sources is relatively small and the players generally known, but falls apart completely in the context of social media where the number of players is measured in the billions. What is needed is something akin to the 'Web of Trust' first suggested by Phil Zimmermann in 1992, where digital certificates and signatures are used to work out who trusts whom and

to what degree. If we combined this general concept with blockchain we would have a mechanism to establish and publicly record living editorial trust relationships at social media scale. Now, who might be willing to pay for the development, implementation and hosting of such a service is another question entirely. Such a service would require wide participation, even amongst competitors – somewhat similar to the development of MOS."

Transmissions over the Internet, like emails, can be read and modified by hackers. An email secure certificate lets the user to add a digital ID to an email which ensures that email, message text and attachments have not been tampered with and more importantly was sent by that user only.

Taking this further, this is exactly where IABM members come into play as email certificates go beyond journalist and newsfeeds; software upgrades and general maintenance by vendors should also take this secure route assuring that an

attack doesn't come from someone posing as a vendor.

We may joke about 'if it is on the Internet – it is true', however seriously there are over 150 fact-checkers around the world providing a great service. The issue comes down to fact checking taking time; once deemed not true it is typically too late – the damage has been created. I think this is why in some countries the number of social media forwards or re-tweets are limited to only a few.

As suppliers we need to provide tools, APIs, perhaps even confidence flags – Blockchain won't be the savior, however will certainly help in the long term.

Think with every product you have or service you provide, even if you can add in a little bit of technology to help improve assurance that content is factual, maintenance is real, this is a start. Your customers will decide whether to use them or not, however with the increase in visibility on this topic – don't get left behind when your customers suddenly start demanding it.

The impact of technology changes on skills requirements – a recruiter's view

Dermot Casey
*Managing Director
of EMS*

Broadcasters have always been at the forefront of new technologies because our industry has constantly pushed the boundaries with innovation and change. Since its inception with JL Baird in 1927, whether it be Colour, HD, Digital, Smart, VOD, Ultra HD, Cloud, AI or state of the art graphics, new developments in broadcast have demanded new skills.

This in turn requires our workforce to gain those new skills and, crucially, be willing to adapt. Excitingly, this also opens the door for people with different skills and from different technology backgrounds or business routes to enter into our new broadcast and media world.

What type of candidates are clients looking for to leverage today's fast-moving technology and with what skillsets?

Ideally candidates now need to be able to understand the entire content supply chain – from creation to consumption; in the new multi-platform broadcast and media world, such people are gold dust! Here's a checklist of typical requirements:

- A background with experience in IT, IP, workflow and developers with a broadcast bias
- A workforce with a fusion of these skills, knowledge and experience and a positive attitude to change and evidence of flexibility
- Broadcast coders with experience of working with NMS/OSS software such as BNCS or Dataminer
- Project or data managers with cyber security awareness
- Cloud, AI, Coding and crossovers with the telecoms and communication industry

The skillsets required can be very specific and so there is a need to attract candidates from far more diverse backgrounds than ever before.

Here's the issue

Candidates with this kind of experience are scarce and in high demand. The frustrating thing is that there appear to be less and less graduates choosing broadcast courses and therefore the candidate supply chain is under pressure.

Why is this? – there are several reasons:

1) The multitude of options at schools and universities
2) The relative attractiveness of other cutting edge 'sexy' technologies such as Gaming, Finance, IT/Telecoms, Green technologies
3) The conservative image of broadcast engineering and technology

Going forward – the future

We are seeing a new breed of media and telecoms companies emerging into what was just the broadcast space as a result of the OTT revolution: Amazon, Netflix, Google, Apple, Comcast (Sky) for example, as well as a different approach to broadcasting from countries like China.

New technologies are moving into the broadcast and media space such as SaaS (Software as a Service) 5G, AI, Robotics and Machine Learning, so what level of expertise, experience and learning is required for these new ways of doing things?

As technology has changed so have lifestyles; candidates have and will have more and more the ability to balance their time in the workplace and at home. Employers now need to consider the home and family life of key employees along with agile working and mindfulness aspects - a far from easy job in some roles.

Questions and Answers

Q. How will all this affect you or more importantly a young person considering their future career options?

A. There is a need to promote our industry and the exciting new roles in it, especially at more critical ages, to broaden appeal and understanding

Q. How can we attract and train sufficient numbers of technologists with the required level of new skills?

A. Good people with up to date skills and with an open, proactive and positive attitude to change and flexibility will always find roles. There will constantly be technology changes, but a fully diversified and agile workforce will always succeed.

I have only touched on a few of the challenges facing us, but there are exciting and profitable times ahead for the people who embrace the new ways in broadcast and media! If you would like to discuss any of the issues raised here, call by the EMS stand at IBC – Hall 1 B09.

EMS Technical Personnel was established in 1998 as a specialist broadcast Recruitment Company with a background in broadcast technology and is run by Dermot Casey.

They exclusively focus on the Broadcast industry and all of their staff has a relevant experience in the industry. They specialise in supplying high quality Broadcast staff in fields such as; Technology, Operational, Post Production and Creative.

EMS have been working with RISE, who have set up a group of senior leaders, to look at ways of attracting more young people (especially women, to get the balance right) to choose a career in broadcast technology. This group includes; The BBC, BT sport, dB broadcast, EMS and Sky.

New Audio Business Report identifies key drivers of change

Lorenzo Zanni
*Head of Insight &
Analysis, IABM*

IABM has released a new Audio Business Report for members, looking at the current state of the industry and identifying the key drivers of change as the audio market goes through a radical transition.

This is our first standalone report on the audio sector, and it will now be regularly updated as part of IABM's ever growing range of reports to support members' business activities. Members can read the full report in the Insight & Analysis section of the website.

The need for increased efficiency, together with changing skillsets at customer organizations, are the biggest drivers in the audio business today. The focus on efficiency is a must as programming investment rises to new levels and media organizations – including radio stations – deliver content to an increasing number of platforms. Rising requirements, flat budgets, and technology developments have also driven pricing down, but the requirement for highest quality audio remains. The audio industry is facing a number of challenges, but as this report shows, there are plenty of opportunities opening up too for those willing to grasp the nettle and take things to the next level.

Audio market in midst of radical transition
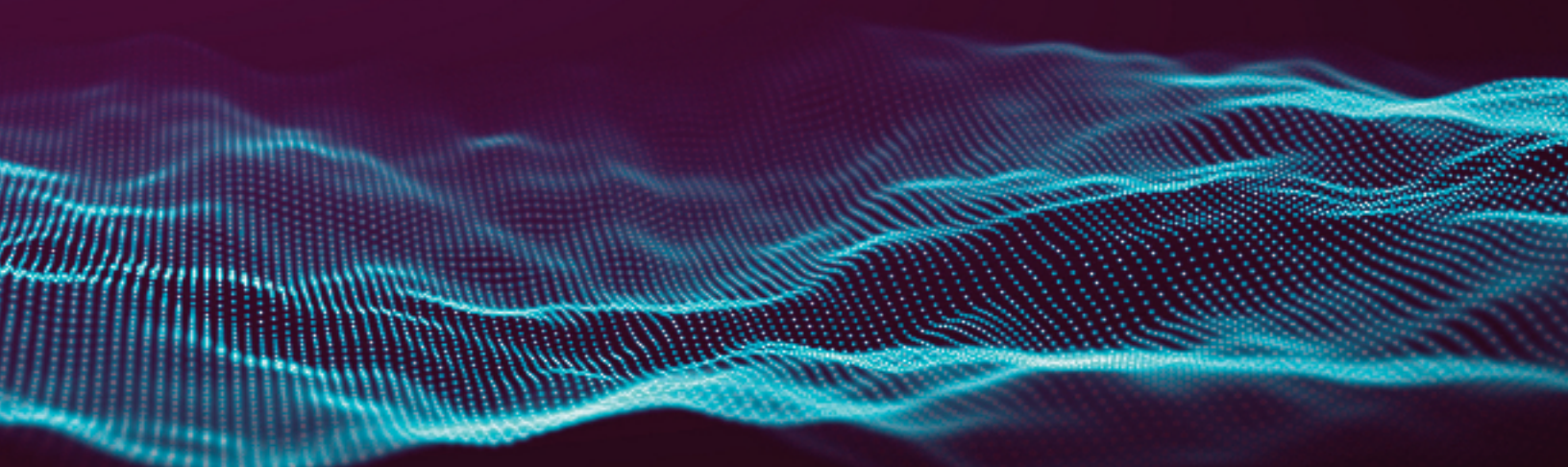
Some of the highlights of the report are:

- Audio – as with video – is transitioning to IP to leverage its potential benefits in terms of efficiency, flexibility, remote production and immersive audio
- To date, deployment of AoIP has been slow, with a hybrid approach being favored
- AES67 is seen as a positive development
- Multiple standards continue to be used in the audio industry
- Virtualization and automation of workflows were identified as a major focus for the future
- Immersive audio is still very much in its infancy in most sectors
- Drive for simpler and more cost-effective products as budgets continue to be squeezed
- Rise of streaming platforms and content investment impacting technology development
- In contrast, television and radio broadcasters' budgets are being squeezed, leading to a sharp focus on efficiency

In terms of trends, the report's findings show that efficiency is an ever more important driver in the audio sector – doing more with less, together with a requirement for technology that is easier to use for less skilled operators. The push for efficiency is driving a shift to virtual consoles, with remote production features also becoming increasingly important for the same reason.

manage

"We have a deep-rooted desire to solve challenges for our customers, and innovation is a constant in our journey."

Vimalesh Melwani – Prime Focus

Manage –
the next move

Roger Thornton
IABM

Manage is one of the
BaM Content Chain® segments that's
seeing the most change and innovation.
Content management systems have
historically been associated with large,
complex and expensive installations,
requiring extensive customization and
integration work by technology suppliers.
But as broadcast and media companies
have increasingly required more flexible
systems to keep up with the inexorable
move of the industry towards multi-
platform content delivery, they are
shifting away from monolithic solutions
towards agile content management
systems that are increasingly utilizing
microservices.

THE BaM® CONTENT CHAIN
from **Creator** to **Consumer**

The importance of data has also risen exponentially – not only with regard to content metadata but also in streamlining workflows using business rules which also rely on data. This has meant that asset management and workflows are increasingly being handled together with overarching workflow orchestration solutions for today's media factories. It's no surprise then that, according the 2019 Global Market Valuation and Strategy Report, with double digit growth in 2018, workflow orchestration is a flourishing business.

For this Special Feature, we have spoken with a number of IABM members with products and services in the Manage segment to discover what is driving change and development of management systems, how they are being applied, and what we can expect next in this vibrant, but highly competitive, segment of the content chain.
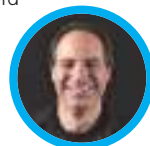
Drivers of change

For Veritone's Product Marketing Manager, Media & Entertainment, Ashley Bailey, it's the technology that is enabling much of the transformation of the broadcast and media industry that is driving change. "One can't talk about change in Manage without talking about the cloud and artificial intelligence. Now these two aspects combined are creating a wave of change for many – and certainly those in the media and entertainment industry. In a multiplatform world, the key priorities to managing content from a technology perspective are open APIs, built-for-the-cloud solutions, cognitive processing (through AI/ML), and supreme metadata."

"The main driver of change is the transition of scheduled programming to an on-demand, direct-to-consumer media strategy," says Frank Wallace, National Accounts Manager-Media & Entertainment, Chetu. "For the most part, this means leveraging streaming distribution technology to give viewers, listeners and readers direct access to content wherever and whenever they please. This marks a paradigm shift from broadcasters utilizing external channels and scheduled programming."

David Colantuoni, VP Product Management at Avid, sees the explosion of content to serve all these new channels as an additional driver of change in Manage. "The sheer amount of content being created and the multitude of ways that media is being experienced creates production and distribution pressures – from the need for greater production speed and mobility to more intelligent ways of finding and managing assets. Further, media organizations must accommodate international versioning issues, including language captioning.

"To address the challenges of our ubiquitous 'always-on' live environment, media organizations need ecosystems capable of scaling and managing assets logically and flexibly, together with sophisticated, scalable storage technology to enable content production and distribution from anywhere to anywhere, and on virtually any device. Workflows must integrate with web, mobile, and social platforms, while enabling all stakeholders to view footage in a browser, and comment on it or log it as needed," Colantuoni adds.

VSN Marketing Director, Patricia Corral, also sees an integrated approach using best-of-breed components as central to success in Manage – moving towards integrated workflow orchestration. "The main factors of change taking place in the field of media and content management are based on two key concepts: an increasingly advanced automation of all workflows that allows users to perform more tasks investing less time and resources, and of course, a commitment to system integration and adaptability.
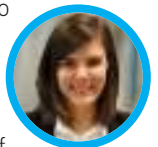
"Management systems and tools in the broadcast and media industry are reaching extremely advanced levels of specialization and complexity," Corral adds. "We are on the way to convert technologies such as a Media Asset Management software into the real core of media solutions and facilities. These systems already are in charge of orchestrating and controlling the entire content flow, in order to feed the rest of the technologies and software products that are part of the whole solution.

"That is why we consider it crucial that all software framed within the area of management (either for files, media, workflows, metadata, etc.) is capable of orchestrating the entire media lifecycle without any type of limitation or barrier when it comes to integrate third-party systems," Corral asserts. "Users must have total freedom and flexibility to select the best systems
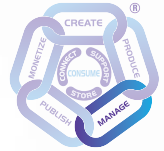
available in the market for their work environments. And technologies such as Media Asset Management software must be there to help them optimize all content transfers and workflows between third-party tools."

Prime Focus Technologies identifies the issue of localization as being central as content volumes and distribution needs rapidly grow. "With the recent explosion in digital platforms, new business opportunities are opening up and premium content creation investments have touched an all-time high," says Vimalesh Melwani, Vice President, Product Engineering at Prime Focus. "To reach new markets, M&E players are now offering content in additional languages, which is spiking the demand for localization services like dubbing, subtitling etc. The race to deliver high quality content has led content creators to break geographical barriers and work with best-of-breed talent across the globe. These developments have resulted in sprawling supply chains and the increased need for collaboration. With a burgeoning number of content hours and versions to be managed, M&E enterprises are turning towards centralization and end-to-end content management solutions that facilitate seamless operations across the supply chain and help lower cost."

For Piksel, there are two main factors driving change: "There's a lot of consolidation happening in our industry right now, and that means that we're seeing more companies trying to bring a lot of different systems and infrastructure together. Naturally, that has major implications in the Manage area," says Piksel Managing Director, Kris Brown. "Added to that, you have the ever-present threat of the FAANG companies to 'traditional' M&E organizations. The opportunity there – or, necessity, perhaps – is to try and add agility and flexibility into the supply chain in order to counter those threats."

Dalet too sees the FAANGs as driving change, alongside other new market entrants. "Companies that have been creating and distributing video content for years now have to compete with technology giants, like the FAANGS, and lean start-ups who target digital-first audiences," says Kevin Savina, Director of Product Strategy at Dalet. "Ultimately, the goal is to deliver more content, to more channels and to targeted audiences quicker and at a lower cost, and automation and

efficiency are the keys to success. Streamlining and automating the content supply chain for multi-platform distribution has proven to increase ROI by reducing costs and time-to-market."

How are the new media factories leveraging the new content management and workflow orchestration systems?

So far we've looked at the drivers behind the rapid changes that are ongoing in the Manage segment, but how are broadcast and media companies harnessing these to help them transform into efficient, agile media factories?

Dalet's Kevin Savina gives us a real-world example. "The ability to implement just-in-time, on-demand and at the appropriate budget will facilitate the agility to respond to audiences at their ever-changing platform(s) of choice," he says. "An efficient media factory needs to automatically repurpose content for multiple delivery endpoints without having to repeat processes or involve manual work. The ability to orchestrate content repurposing workflows based on business rules, spanning different formats, metadata needs, timeframes and destinations, can considerably cut down time-to-audience.

"For example, one of our sports clients needs to deliver race highlights to five different destinations (two social media channels, their VOD platform, an affiliate and a broadcaster) within seconds of the highlight taking place," Savina adds. "With the Ooyala Flex Media Platform, the same highlight is automatically re-packaged with the correct graphics, metadata and video format for each deliverable. This task would have previously taken up to 30 minutes of manual work for two operators."

Ooyala Dashboard – orchestrate and monitor packaging

Piksel's Kris Brown sees today's needs as just a continuation of what's always been required, but with a new angle now added: "Really, the priorities are the same as they have always been around content management. Chief amongst them is the age-old issue of cost efficiency; 'how cheap can we make it to manage our content?' The additional consideration now though is 'how cheap can we make it to manage our content while allowing for speed and scalability?'. Viewers want everything everywhere, and that needs to be just as big a priority as keeping costs down."

For Avid's David Colantuoni, accessing content is king for the media factory. "Media companies need to be able to find and retrieve content quickly and easily regardless of its location. The ability to quickly and efficiently search all different storage mechanisms, both in the cloud and in on-premise, archive or nearline storage, is essential to retrieve assets quickly. In the 24/7 news environment, for example, journalists need faster workflows so that they can be more autonomous and productive in the field – able to search, access and create content, send packages where needed, and get video on air and online faster – all from their laptops. Media companies also need functionalities like integrated metadata sharing so that they can leverage content across brands to stay competitive in today's cost-driven broadcast environment."

Avid – NewsroomManagement Laptop

Automation is at the heart of the media factory for Prime Focus. "Today, broadcasters are following a 'digital first' strategy, rather than focusing only on linear playout," says Vimalesh Melwani. "Adopting automation-led technology is therefore emerging as a major priority, as this enables them to manage digital distribution across the OTT universe with greater ease. Automation helps enhance operational efficiencies, lower Total Cost of Operations (TCOP) and achieve faster time-to-market across the content lifecycle – from creation to delivery. In addition, becoming cloud-ready is topmost priority. M&E enterprises are exploring multi-

cloud solutions that help them leverage the elasticity of public cloud infrastructure, while giving them the flexibility to tap on-premise/private cloud infrastructure as needed."

Chetu's Frank Wallace also has a clear recipe for a successful media factory. "Consumers are now demanding more and easily accessible content to satiate their media consumption needs," he says. "This puts a lot of strain on media factories and broadcasters to optimize the entire supply chain from production management, maintaining archives, to distribution.

"Critical components on the production and archiving segments are tools to seamlessly switch between batch scanning, encoding, and other digitizing processing. Additionally, creating a centralized repository with advanced indexing and cataloguing tools. Furthermore, ensuring assets can only be accessed, shared and edited by approved parties with smart permission controls.

"The main priorities in terms of distribution are cross-platform support, multiscreen support, a sleek frontend, and an elastic, load-bearing backend with dedicated endpoints. For broadcasting platforms, the frontend and backend must be equally intelligent boiling down to seamless streaming protocols and intuitive UI/UX," Wallace adds.

VSN's Patricia Corral also has an integrated, efficiency-driven vision of the new media factory. "There are several functionalities and management processes paramount in multi-platform work environments, such as workflow automations, smart cataloguing of content, automatic content production or scheduling based on consumption predictions and analytics, the flexibility to edit files and workflows easily, etc.," she says. "Here is where a good integration with a media management system can help us to stand out, being faster and more efficient in the delivery of content regardless of the final platform of destination.

"For example, our new web-based traffic and scheduling system, VSNCrea, presents at IBC 2019 an advanced integration with VSN's MAM system, in order to offer users total bidirectionality. That is, VSNCrea users can make changes to metadata and files stored in the MAM directly from the VSNCrea itself, without having to access the MAM at all. These changes will be reflected in real time, and the same goes if we perform the editing and changes the other way around (from the MAM to the traffic and scheduling). In the same way, users will be able to access the proxy preview of the assets stored in the MAM directly from the traffic system," Corral explains.

BIY – threat or opportunity?

IABM research shows that an increasing number of broadcasters are investing in in-house development projects in Manage – running at 41% in our most recent survey and principally within the Manage area. We asked our correspondents whether this presented a threat or opportunity for them. All see only opportunities, but each with an interesting individual take.

Chetu's Frank Wallace is very bullish: "It is great to see that broadcasters are recognizing the need for software development to meet their long-term strategies. This allows them to own their software giving them the flexibility to scale and evolve with their business needs by integrating with an expanded set of partner APIs and including all features critical to operations.

"Where Chetu finds the opportunity is augmenting broadcasters' internal development teams with skilled developers that have the domain expertise and know-how within the media and broadcasting industry to offer exceptional software development solutions. As a result, our subject matter experts are equipped to adapt to changing market conditions and provide insight into initiatives that add value to an organization's objectives," Wallace adds.

Vimalesh Melwani at Prime Focus agrees. "Today, broadcasters are embracing cloud adoption in a big way, which is why some are looking at developing in-house infrastructure to support their content management needs. This is a major opportunity for companies like ours, as we offer holistic SaaS solutions based on multi-cloud and open architecture. This means that customers can continue leveraging their existing investments even if they deploy our solution."

"It's definitely an opportunity to collaborate with our customers," says Veritone's Ashley Bailey. "We live in an integrated world. Organizations, namely high-tech software providers, need to be able to work within a customer's environment; this means thoroughly understanding and adapting to their workflows while improving and creating operational efficiencies."

"Every company is different, and their needs are different as a result," says Piksel's Kris Brown. "In-house builds can be great, but only if you have a very specific idea of what you want to accomplish and the skills to deliver on that vision. Our view has always

been that it's better for M&E companies to focus on what they do well and work with the technical partners who can help them with what they don't. Either way, we see this trend as an opportunity. We believe that working side-by-side with in-house developments is the right way forward – for us and our customers – and so we try to combine our strengths with their knowledge and understanding of their organisation and its needs."

For Dalet's Kevin Savina, microservices are the key. "Often we hear media companies say that it's difficult to find a management system that delivers exactly what they need, which is why deploying a platform with a microservices architecture, with open B2B and B2C APIs makes a lot of business sense, since it gives them the best of both worlds: a solid underpinning asset management and workflow orchestration engine, with the ability to build their own integrations and user interfaces on top.

"Both with Dalet Galaxy five and the Ooyala Flex Media platform, we have worked with a number of clients who wanted to give their staff a customized user experience, with only the day-to-day functionality they require, but powered by a productized solution that grows with the industry's demands. A great example is TransPerfect and their technology division, Translations.com, which makes clever use of the Dalet Galaxy five platform, tapping into the web services API for its own development and applying the core component-based workflows and data models to its specific need for translation, localization, versioning and delivery," Savina explains.

Dalet – Ooyala Newer analytics dashboard

"We have integrated our software for media management with customers' in-house developments on several occasions, in order to achieve a solution as complete, optimized and customized as possible," says VSN's Patricia Corral. "We have also found clients who have been working with their own in-house systems for decades, and have finally decided

to replace them with solutions from existing vendors, so that they could allocate less internal resources for maintenance and update.

"In the end, the dichotomy that arises here is whether broadcast and media companies can allocate enough resources and investment to keep these solutions up-to-date and always upgraded. But in one case or another, we are lucky to have an open, flexible and easy to integrate technology that allows us to work with clients in both cases," says Corral.

Are workflow orchestration and asset management now happy bedfellows?

This is another question which elicited an almost complete agreement. For Dalet's Kevin Savina, full integration is the future. "The key here is to have a symbiotic relationship and/or a unified offering where orchestration is deeply aware of the content and more importantly, its lifecycle and metadata in order to make precise decisions and predictions. Gone are the days of Input trigger – Process – Output."

So too VSN. "It can't be denied that there is an imperious need to work under one common platform," says Patricia Corral. "It is obvious that the workflows are intrinsically related to media files, so being able to work with an integrated system, a centralized platform in which both types of operations converge, not only makes life easier for the users, but also allows them to save a lot of time and reduce errors."

For Piksel, it's all about data. "The asset itself, in our eyes, is just one source of metadata in a much bigger sea of information. It's the metadata that we believe is more important, especially when it comes to generating effective rules. We are big advocates of metadata-driven workflows, because better data means smarter processes, full stop," Kris Brown asserts.

"This trend is right on track," says Ashley Bailey. "While Veritone has never separated the two, it's becoming more and more critical for organizations to tackle all aspects of Manage in order to seize other opportunities in the supply chain such as distribution and monetization."

"We strongly believe in the merits of having a single, centralized system to manage workflow orchestration and media asset management," says Prime Focus' Vimalesh Melwani. "In this endeavour, we added a powerful work order management functionality to our flagship Media ERP

software in 2017. The software now provides end-to-end Work Order Management, pre-integrated with its MAM, workflow engine and video tools. This enables users to manage assets, resources and tasks (human-led and machine-led) along with workflow orchestration across the content supply chain through ONE system. Our customers have already started witnessing powerful business benefits from using this."

Prime Focus – Work Order Management Dashboard

"Being able to create a custom application or customize a current platform to optimize workflows through the supply chain is critical to optimizing efficiency," says Frank Wallace of Chetu. "One size does not fit all and technology needs to be leveraged to meet process integration goals through asset creation and versioning, storage and indexing, plus distribution and control."

Cloud – no-brainer in Manage?

We asked our respondents whether the cloud will become the natural home for all operations in Manage. What are the challenges still to be overcome? "The ability to work collaboratively and remotely is becoming critical to today's media workflows," says Avid's David Colantuoni. "Access to cloud-based files accommodates co-located productions. Productions are no longer tied to local talent, preferring the flexibility and cost benefits of talent that can work from anywhere. Consider many of today's film and TV productions. Production companies have a global talent pool of editors, sound engineers and visual effects experts that are now accessible around the globe. Talent can work remotely and access the same high-resolution files, from anywhere. Likewise, studio and production executives can access content and weigh in on dailies from anywhere. This freedom not only yields higher-quality content but also dramatically lowers production costs.
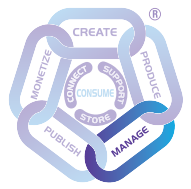
"Cloud-based, or partially cloud-based, workflows and storage deliver this capability," Colantuoni adds. Yet, as more and more workflows evolve to the cloud and cloud storage is part of the mix at least for some needs, the economics of how it all works together has not been fully resolved. And, as media in the cloud is everywhere, security becomes a greater concern. Content must be secure both from inside and the outside. With cloud solutions, it's possible to control who has access internally while protecting assets from external threats."

"For us, the adoption of the cloud is an inevitable step in this segment," says VSN's Patricia Corral. "In the end, media management systems must be able to be operated by multiple users at the same time, anytime, anywhere. Flexible access to the system – which ultimately acts as the core of the facilities, managing workflows and files at all levels – is essential. Hence, we understand the adoption of cloud almost as a natural step in the evolution of this type of technology.

"We still find some challenges that will need to be overcome to reach its full adoption," Corral continues. Among others, I would point to cloud storage availability and capacity cost; the security of the data and information stored (which seems to be also a growing concern for broadcasters and media companies; the bandwidth capacity, which sometimes it is not ideal yet to move heavy files rapidly; and of course, there are still a few examples of technology for media management available only in desktop versions, so in the end this fact limits remote and multi-site workflows, as well as the adoption of the cloud."
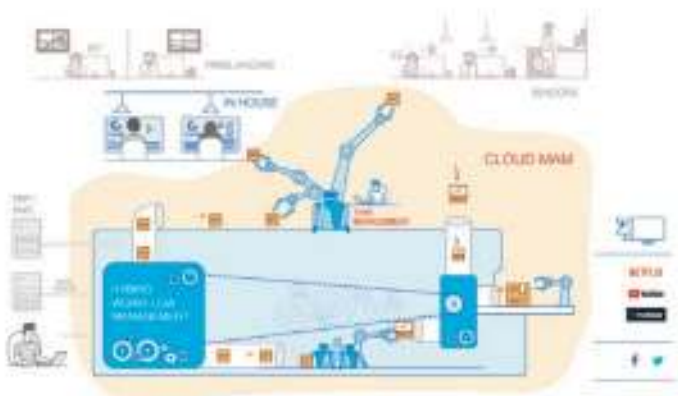
Prime Focus – Work Order Management with cloud

Vimalesh Melwani of Prime Focus sees the cloud as the natural choice too. "In order to manage OTT/VoD requirements more effectively, content creators are swiftly moving to the cloud. They now understand the elasticity and cost benefits of the cloud better, and are actively looking to build a connected enterprise that enables seamless collaboration across the supply chain – including customers, vendors and freelancers. Cloud technology is also emerging as a cost-efficient way to leverage AI technology, especially AI-led metadata discoveries like speech to text, content metadata etc. AI requires extensive use of machine resources, and these can be easily managed on the cloud, given its immense scalability and flexibility. This means users need not make CAPEX investments for their AI-led operations, and these cost benefits are further fuelling cloud adoption."

"Cloud technology is being adopted across all industries and media and broadcasting is well poised to take advantage of the cloud's many benefits," says Frank Wallace of Chetu. "Data storage may be on the forefront of cloud-based tech, but accessibility and delivery are a close second. High-quality content, delivered seamlessly, comes at a high data cost – the cost of being successful in the media landscape. End-users demand instant and endless access to a content-rich repository, which is why OTT is a sought-after content delivery model. Just like all other cloud-based systems, SaaS options built on platforms like AWS allows for better user experiences. The biggest hurdle here will be migrating infrastructures and massive amounts of media to cloud environments."

Cost is also the one issue Dalet sees holding up the move to the cloud – but Kevin Savina says the company has answers for this too. "The beauty of cloud deployments are well known: security, availability, scalability, and so on. However, the elasticity of cloud services come at the obvious cost of scaling such services. We see the combination of AI and Machine Learning-augmented orchestration as a means to tap into the above cloud benefits, while nonetheless using predictive analytics combined with job costs and budget in order to assess when to start, based on predicting when it will complete, within the SLA mandates of time and budget."

Both Veritone and Piksel recognise the potential benefits of the cloud, but feel we have some way yet to go. "We definitely see momentum continuing to build around cloud, but it's still a case of positivity on the surface outweighing action behind the scenes. We're

seeing pockets of progress rather than widespread adoption," says Piksel's Kris Brown. "I feel like the benefits of cloud are yet to be fully understood within many M&E companies, which is a shame. I think cloud-based vendors need to get better at pushing things like freedom and flexibility, but they also need help from internal evangelists who can pull their organisations in that direction."

"The adoption of the cloud is still maturing, but given where we are in the cloud's evolution and the fact that we now have data to demonstrate the cloud's effectiveness and security, that maturation has accelerated," says Veritone's Ashley Bailey, who also calls for more action from cloud vendors. "Cloud deployment presents more opportunities than challenges, especially when it comes to implementing multi-cloud environments – a proven practice that no longer has the barriers it once did. If there is a challenge, it's that there is not enough clear information on why the cloud is (more often than not) more secure and more stable than on-premises solutions. Cloud vendors must continue developing the research and giving people the information and tools to make informed decisions about the cloud."

AI/ML – key to automation efficiency

In IABM's regular reviews of trends in the industry, the adoption of AI/ML is very much on the increase, particularly in the Manage segment. We asked our correspondents where and how they are deploying AI/ML, and what the benefits are.

"Tapping into both AI and ML in order to learn, for example, how a particular workflow consumes resources and time/costs, helps users predict and make decisions as to when/how to best execute," says Dalet's Kevin Savina. "Additionally, the ability to leverage and orchestrate a number of multimedia indexing tools available in the market for automatic metadata enrichment can save around 70-80% manual work in transcribing video content, captions creation, recognizing objects, faces and emotions and more. This can significantly reduce the time spent looking for content and suggest contextual content recommendations from a large content archive, as well as handle automatic content captioning in multiple languages."

Avid's David Colantuoni sees a major – and value-enhancing – role for AI too. "The most obvious application of AI today is around automated metadata
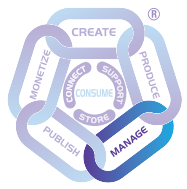
extraction or content 'indexing'. The process of taking content, applying an algorithm to derive time-based metadata that is then registered in an asset management system is greatly enhancing content discoverability. Perhaps even more valuable is the ability to discover valuable content long after it has been archived. Often, we don't know in advance what content will be significant. AI can help uncover valuable assets that are hiding in plain sight within a content library. With enough metadata strata you can triangulate in to find content you may not even know you have.

"Another significant AI use case is automated quality control (QC). AI-driven QC solutions can churn through a library of clips at one keystroke and analyze a broad range of quality parameters. It can show, for example, whether a program master that's targeted for French audiences actually has French language audio tracks, eliminating the need for someone to watch an entire show track by track to know that it's the right version all the way through – a tremendous time and resource saving," Colantuoni adds.

"AI can also be used to ensure the accuracy of closed captions. Without AI, manual caption checks are required. Sometimes captions are wrong in the program master or aren't in sync with the audio. AI quality control can confirm not only that captions are there but also that they're correct. Some QC solutions can even make needed timing corrections," Colantuoni concludes.

Prime Focus is also betting heavily on AI. "AI can play a major role in helping M&E players streamline content operations and manage their supply chains more efficiently. However, there is a need to distinguish between RPA (Robotic Process Automation) and AI in this context," says Vimalesh Melwani. "While RPA is effective for automating routine workflows, AI can play a far bigger role in the context of analysing different aspects of content (video, audio, on-screen text etc.) and generating deep metadata. AI-generated metadata can be leveraged to drive efficiencies across several core content operations – including cataloguing, compliance editing, subtitling, OTT distribution, sports highlights creation and more. AI is currently a major focus area for us. We recently launched CLEAR Vision Cloud - a media recognition AI engine. Leveraging patent pending Machine Wisdom technology, the engine delivers automation and data that is highly accurate, relevant, contextual and actionable. Vision Cloud powers ready to use AI-led micro services that have been custom made for solving strategic M&E use cases – from content

segmentation to thumbnail creation to scene description and play-listing."

"The automation of traditionally time-intensive manual tasks is something that M&E companies should absolutely be looking at," says Kris Brown. "We feel that there is a huge amount of value to be gained by doing so, and many of Piksel's products already have significant machine learning (ML)-powered components. Fuse Metadata Manager, for example, utilises a vast, ML-driven 'content knowledge base' which allows for highly sophisticated ID-matching and the automated enrichment of metadata. And Fuse IQ is a suite of ML applications aimed at simplifying and streamlining real-world supply chain problems."

"Without a doubt, asset management and AI go hand-in-hand," says Veritone's Ashley Bailey, who sees AI unlocking a better, more creative future. "If an organization has the need to manage their assets (and virtually any organization with any amount of assets does), then it has a need for metadata. Because they can use AI to glean this metadata, people can now have the ability to step away from manually logging metadata and instead oversee the workflow, leaving them free for more strategic roles. At Veritone, we refer to this concept as 'in the loop,' 'on the loop' and 'outside of the loop'. In this model, humans no longer need to be in the loop, spending their time completing manual tasks. Instead, they're on the loop, keeping an eye on things but focusing on other critical tasks and initiatives. Eventually, the humans might be out of the loop entirely, so they can focus on other, complementary or even unrelated initiatives."

Veritone – aiWARE Platform Architecture

VSN's Patricia Corral's thinking is very much in line with Ashley Bailey's. "Surely, we believe that more automation and specifically, more 'smart' automation is needed to
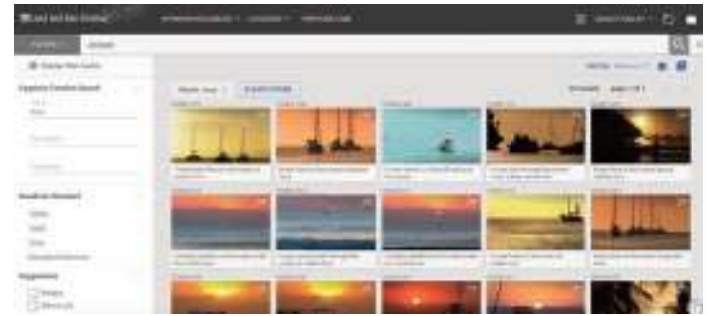
Veritone Digital Media Hub Search and AI capabilities

help users concentrate on content creation rather than on repetitive tasks. In the end, a greater automation of tasks lets users become more agile and creative. Thus, companies can be more competitive in the market and stand out. This is why we consider AI a fundamental piece in the development of automation tools and in fact, our latest integrations and features have received a great welcoming, both for automatic cataloguing and advanced search purposes.

"However, our goal does not stop here - at the mere automation of workflows. We are determined to make AI gain a greater relevance in our platform little by little, being able, for instance, to self-segment content or chapters of a program, automatically create video edits for promos and advertising, or to recommend to the user when cuts for advertising should be included in the programming. For sure, there is still a lot of potential in AI to unveil."

Last word on AI goes to Chetu's Frank Wallace, who sees great potential for it at the consumer end of the content chain. "Although AI can be used to automate workflows, where Chetu sees the opportunity in Artificial Intelligence is increasing user experiences. Users are now becoming so used to OTT models that they expect personalization and value-based recommendations on media and content. Going above and beyond user generated ratings to suggest or recommend media, AI has the ability to use complex algorithms to create a recommendation engine based on many meta parameters and user interactions."

What's next in content management technology and workflows?

Finally we asked our correspondents to take a peek into the future of the Manage segment of the BaM Content Chain® – what's coming down the road; what will be writing about next time we take an in-depth look at Manage?

Veritone's Ashley Bailey sees the same opportunity just mentioned by Chetu. "Personal viewing experiences will become more and more prevalent and eventually expected from consumers. While I can't talk about what we are planning, I can say that we are passionate about democratizing AI – and making it so that people don't need to be engineers, or even technical, to use AI technology to improve their workflows and lives." We'll be watching with interest!

"I think that M&E companies need to get ready for a world in which automation is increasingly pervasive, and one in which the idea of needing a physical footprint to deliver is outdated," Piksel's Kris Brown predicts. "Instead, that will become much more closely aligned to the cost of distribution deals or consumer demand. Added to that, we're going to see continuing improvements in targeting via better content discovery. That will be driven mainly by an increasing focus on data quality that enables systems like recommendations engines to perform better than ever."

Piksel – Fuse Metadata Manager

For Avid, it's about enabling efficient, dispersed operations and leveraging AI. "The new version of MediaCentral gives news, sports and post-production operations with dispersed teams the ability and agility to create content faster and deliver it to more outlets and devices. It eliminates geographic and budget constraints, allowing regional broadcasters and sports organizations to produce content more efficiently at better economics," says David Colantuoni.

"Designed for today's mobile journalists and growing social and mobile content consumption, MediaCentral 2019 offers new features like logging for news, sports, and reality TV and multi-site support with more powerful search, enabling media producers to turn content around fast. With MediaCentral 2019, teams of any size – across multiple sites – can quickly ingest, log, search, edit, distribute and publish to multiple platforms all from a unified, scalable platform.

"We've also introduced sophisticated services and workflows like cognitive services. Through services like phonetic indexing – indexing the spoken word of ingested content – you can search on phenomes, or just the voice of what was being said, or use it to complement a metadata search.

"It's now possible to upload content to a cloud computing platform like Microsoft Azure and use AI-driven cognitive service capabilities to create metadata that's searchable within your ecosystem. Functions like speech-to-text, facial recognition and character or image recognition become searchable metadata. More advanced AI-driven metadata search can uncover content media companies might not even know they have, opening up new media and revenue opportunities," Colantuoni concludes.

"We have a deep-rooted desire to solve challenges for our customers, and innovation is a constant in our journey," says Prime Focus' Vimalesh Melwani. "Our dedicated team of 320+ R&D engineers consistently works on analysing the latest technology trends and augmenting our products' capabilities. Enhancing our AI offerings is currently an important part of our product roadmap. We are in the process of creating innovative AI tools for compliance-driven post production and mastering. These will help content creators cater to different regulatory requirements across geographies with greater ease. Other innovations include AI-led scene boundary detection and the identification of points within content for ad insertion to make OTT distribution more efficient."

"For sure we will keep witnessing how new, innovative technological advances will continue entering and disrupting our sector, as it has recently occurred with AI," says Patricia Corral of VSN. "And the most exciting but also the challenging side of this is that we will be capable of applying all these new – and nowadays inconceivable – technologies to media management in just a matter of months. Thus, we believe that it will be key for broadcasters to strengthen their existing systems and ultimately, invest in new technology for media and business process management that allows

them to integrate all these new and disruptive technologies easily without losing any of their systems' potential and usefulness and of course, without affecting users' productivity and daily work."

Dalet – User Interface

Final word goes to Kevin Savina of Dalet, whose recent acquisition of Ooyala is covered elsewhere in this edition of the Journal. "As previously separate companies, both Dalet and Ooyala have kept a close watch on market needs and how the business of managing content from production to distribution is changing dramatically for both media and non-media organizations. Today, the ability to launch new services quickly at reduced operational costs is essential for content owners and distributors to remain competitive, and as a response, Dalet and Ooyala have been working at launching new SaaS-based content management solutions. This was one of the key drivers behind Dalet's Ooyala Flex Media Platform acquisition, and having combined efforts, Dalet is now working on the launch of a quick-to-deploy, hosted sports distribution solution, designed and pre-configured to import, manage, package and deliver content for sports and eSports leagues, teams, rights holders and broadcasters. Similarly, any company with a video marketing and branding strategy can benefit from Dalet's upcoming hosted and easy-to-use solutions, focused on automated multi-platform distribution for brands.

"Additionally, media organizations seek to easily offer/expose their 'owned' content inventory to external entities for monetization and/or brand recognition. The inventory needs to be integrated with the original source of content (MAM), the user experience must be simple and intuitive, similar to standard online shopping experience and the complexity of the supply chain (including rights-check) must be abstracted from the end-users. Dalet is working on offering subscription-based services to provide users with a simplified view of their asset catalogs and enable external partners/affiliates to access (or request access) to their organization's owned-content inventory. In a nutshell, this will be an easy way for users to monetize their inventory of owned-content managed in their Dalet Galaxy five system. Now under the Dalet umbrella, the Ooyala Flex Media Platform has a solid roadmap, with a number of new features being unveiled at IBC 2019. Increased support for OTT workflows is essential for a solid multi-platform distribution strategy, and this will remain a strong focus for our Product Strategy teams in the next few months," Savina concludes.

Countries such as Singapore,
which is a high density city state,
will roll out 5G in 2020

APAC region update

Peter Bruce
Director,
APAC, IABM

Asia = 4/5/A

We have just come off the back of BroadcastAsia 2019 (Singapore) and the BIRTV Conference and Exhibition (Beijing). The presentation slide that summed things up in terms of the technology focus was one that said 4/5/A. Of course, all the conference participants were wondering what it all meant? It refers to 4K, 5G and AI. BroadcastAsia in June and BIRTV at the end of August had their differences of timeline between the two regions of what it all meant and the urgency of roll out of the three topics.

Although these three topics are paramount in both regions, there is certainly a difference in terms of urgency of roll out; the differences regarding 4/5/A we should consider are as follows. The BroadcastAsia exhibition has attendance mostly from the ASAEN (Association of South East Asia Nations) region. This means that many of the countries within the region realize that 4K is coming, but are trying to understand at what point they are critically required to upgrade their systems. Many countries in ASAEN are still transmitting in 625 lines and the analog switch off is still to happen, particularly with the government TV stations, which are happy to drag their feet on the topic and purchase UHD only when they buy new equipment rather than proactively upgrade studios.

5G in the ASEAN region is a totally different matter; almost all countries are in the race to roll out the technology, with major announcements from most countries including Singapore, Indonesia, Thailand, Philippines etc. regarding the initial testing and plans to get 5G on the ground and real operational effectiveness within the next year or two. This will be a real game changer as these countries will catapult the connectivity speed within main cities and allow the receiving of video over 5G – including fast delivery of video to devices where cable has not been accessible previously. But while there are many countries that are making announcements and initializing testing, it is unclear in many regions when universal coverage will

actually be achieved. Countries such as Singapore, which is a high density city state, will roll out 5G in 2020. However, in larger countries such as Indonesia with vast, challenging terrain, it will take longer. They understand it will require huge investment and major physical challenges to be surmounted to roll out 5G, meaning a stretched timeline in many areas.

Several Chinese exhibiting companies
are IABM members, such as KXWELL,
SWIT, Doteck, Gefei and Dayang

AI in ASEAN is another matter for the TV broadcasters; this is an area in which terrestrial transmissions are still very valid. The TV stations are struggling to understand the gains from AI although they know it is coming: how to implement it within their workflows and what the real benefits are? In Asian countries where the ministries for broadcast are different from the ministries for telcos and communications, excitement about AI is weak on the broadcast side. Meanwhile the telcos within the region have been using AI for years and relish the roll out of 5G to utilize the ability to have a two-way communication.

For the China region, it is completely different story. As one IABM member commented, "The 4/5/A approach is a top down push". In China, the central government is enforcing the top tier TV stations to implement 4K. CCTV has always had strong funding as the broadcaster for over 1 billion people, and the other major TV stations are also adopting 4K as a matter of priority. Some of this is happening on an 'as they refresh' basis, while CCTV is reviewing how all its studios need to upgrade to 4K, with some test studios going straight to 8K. The knock-on effect has been a boost to 4K sales, especially within the production arena. Any purchase of acquisition hardware today in China will take into account its 4K capability. At BIRTV show we saw a whole pavilion from Guangdong illustrating the 4K transmissions and productions that are already happening in the province.

5G has been well publicized in China as a focus for the central government. The amazing thing is that they are ahead of their own 5G roll out plan that they put forward almost two years ago – the trade dispute with the USA has meant a re-focus and it is now full speed ahead with 5G.

AI is the other next topic being pushed down from the top by the government – it is one of the key initiatives highlighted in President Xi Jinping's 5-year plan roll out – and during the BIRTV show we saw demonstrations of AI on many booths. IABM had several demonstrations on the National Radio and Television Administration's booth at BIRTV. It is clear that AI deployment is happening at scale and the media and entertainment sector of China will be core to the use of this technology.

China tech companies begin drive into international markets

China has leapfrogged in terms of technology since the early days when CCBN first started in Beijing in the 1990s. At that point, Chinese technology was largely limited to inexpensive cables and cable ends. When visiting the main shows in China today, it quickly becomes apparent just how much Chinese tech supply companies have achieved since then – much of which is not immediately apparent on the international stage. The big focus in China for development is 5G UHD, AI and Cloud, with many companies at these national Chinese exhibitions showing major developments in all these areas.

China has recently been working hard to showcase these developments on the international stage. At this year's NAB Show and IBC, the Beijing Municipal Radio and TV Bureau invested heavily to bring the key Chinese broadcast and media technology supply companies to a much wider audience. Many of these companies are not currently well known outside of China, however they would be considered as technology leaders on home soil.

Companies such as Dayang have been in operation since 1989 and can supply all the studio software products needed from ingest through to playout including transcoding, archiving and MAM. The Beijing area has been known for its software development, so it is not surprising the companies that are visible on the China (Beijing) Broadcasting Technology Innovation Pavilion have a strong software background. These include cloud solutions providers such as CVIDEO, Vision Engine who focus on VR solutions, and NSTV who work on the forefront of content security protection. These are companies with experience with leading edge software solutions and have developed their own IP.

Several Chinese companies exhibiting at IBC are IABM members, such as KXWELL, SWIT, Doteck, Gefei and Dayang. These are all members that are focused on achieving internationally what they have already achieved within China. This of course means conforming to international practices – including the IABM Business Standard.

The companies on the Pavilion are not only software solutions vendors – there are also hardware companies such as Switch Box, which produces a neat, compact vision mixer for small productions or college TV.

The China Beijing pavilion is illustrating the best of Chinese technology at both the NAB Show and IBC exhibitions. China technology has come a long way and the Pavilion is certainly worth a visit during IBC this year.

EMEA and UK region update

Darren Whitehead
Director of Business Development, IABM

The UK Members' Council has been refreshed for another two years and I'm pleased to announce has grown slightly in size with a small increase in the number of members.

Those on the new UK Members' Council are –

Amagi Media Labs –	**Micky Edwards**
Argosy –	**Chris Smeeton**
Calrec Audio –	**David Letson**
Clear-Com –	**John Sparrow**
Dell Technologies –	**Simon Haywood**
GrayMeta –	**Matthew Eaton**
InSync Technology –	**Paola Hobson**
Limelight Networks –	**Andrew Gray**
Object Matrix –	**Jonathan Morgan**
Playbox Technology UK –	**Phillip Neighbour**
Ross Video –	**Stuart Russell**
Starfish Technologies –	**Peter Blatchford**
Techex –	**Martin Paskin**
Telestream –	**George Boath**
TSL Professional Products –	**Chris Exelby**

Martin Paskin from Techex takes over from Chris Exelby as Chair of UK Members' Council as Chris has served 2 x two-year terms. I would like to take this opportunity to thank Chris for all his help, guidance and enthusiasm over the last four years – he has been instrumental in making the UK Members' Council the innovative and respected organization it is today.

The newly elected Council will be meeting for the first time at IBC2019 and so if anyone would like to raise any issues or items for Council please contact me at darren.whitehead@theiabm.org

The next event for members and customers in the UK, organized in partnership with Akamai, will be on 1st October at their offices in Ayr Street in London, focusing on Cyber Security. Please go to the IABM website (www.theiabm.org) for further details and to reserve your place.

EMEA

The EMEA Members' Council continues to look at Southern Europe and how it can support a greater focus on members and customers in this region. Watch this space for further news by the end of the year! In the meantime, EMEA Members' Council members share their views and expectations for Q3 and Q4 this year, including what to expect at IBC2019:

Laurent Lafarge, CEO, Anevia

TV service providers now use OTT as one of their main delivery channels. They compete on two factors: delivering the best content and the best quality of experience. In terms of quality of experience, traditional broadcast TV remains our reference: it simply works, under any condition. So the main challenge for the industry is to achieve a quality of experience with OTT TV that is at least as good as that of broadcast TV.

To meet this challenge, I expect to see advances in three areas at IBC this year.

1 Low latency

OTT has traditionally lagged behind broadcast in this area, with latency typically being about 15-20 seconds higher. We all know the adverse effects this has on the user experience, such as spoiler effects when you hear neighbours cheering for a goal you haven't seen yet. The industry has been working hard on reducing latency, and at IBC this year we expect to see more mature low-latency setups for live OTT TV, with industrial deployments. Anevia has been at the forefront of this latency reduction – in large part thanks to our low-latency encoders – and powered the first ultra-low latency commercial deployment in North America, which was unveiled in April this year (see here: anevia.com/medias/2019/04/PR_Low_latency_FINAL.pdf).

2 Video compression

Better compression means better picture quality, which is also essential for a better quality of experience. At IBC, we expect to see vendors showing a better picture quality, including 4K HDR support for OTT, as well as more insight on the upcoming video codecs.

3 The cloud

A key trait of OTT TV is what we call 'elasticity': the number of viewers can suddenly increase exponentially for a single event (e.g. a world cup final), and then go back down to the previous level; the VOD catalogue can increase, as can the number of events to broadcast; and storage and CDN needs fluctuate. This causes problems: either a huge strain on the infrastructure during the peaks, resulting in a bad quality of experience; or an over-sized infrastructure that goes largely unused.

By hosting TV solutions in the cloud, service providers can make their infrastructure elastic and meet the challenges posed by OTT TV – ensuring a high quality of experience even during traffic peaks.

We expect IBC to illustrate the growing role of the cloud for hosted TV solutions. For example, Anevia will be showing NEA-CDN version 5 – the first cloud-native CDN solution that enables a truly elastic CDN (see here: anevia.com/medias/2019/07/NEA-CDN-5_Europe_FINAL.pdf).

The other area of competition is content. This has been driving up the cost of high-quality programming, making it necessary for TV service providers to make the most of each piece of content. There are two options for content owners:

1. Be present in multiple countries

2. Increase their reach in each country

To go beyond their existing subscriber base, many content owners are trying out supplementary business models such as AVOD. This need to monetize – and the need for a high quality of experience – are key drivers in the adoption of targeted advertising solutions. While local regulations such as GDPR limit the kind of data that can be captured or used, there is still power in this proposition and we expect to see some buzz about this at IBC this year.

In fact, Anevia has recently announced having added full ad-insertion capabilities to its end-to-end OTT video-delivery offering (see here: anevia.com/medias/2019/07/DAI_Launch_FINAL-1.pdf).

Franck Coppola, CEO, Hexaglobe

During this year's IBC, we're expecting to see much more interest in moving linear broadcast and OTT operations closer together. I believe that the vision of the integrated BaM Content Chain® pursued by IABM is very adequate here and that the ties between broadcast and OTT will play an ever-more important role all the way through it.

One very promising way to turn this vision into reality is to start by integrating broadcast and OTT content distribution. Apart from allowing broadcasters to save costs and further improve their operations, this move offers a great opportunity to effectively compete with Netflix and other digital pure players. This is an argument we couldn't possibly ignore at our company.

Finally, such integrations are 100% doable and we're ready to prove it at this year's show. Having welcomed the playout automation expert, SGT, aboard HEXAGLOBE Group six months ago, we've kept ourselves busy with projects combining broadcast and OTT since day 1. Exhibiting together for the first time, we're hoping to bring a valuable contribution to the Content Everywhere showcase, where we'll gladly present the results of our common research and development efforts.

Muriel Le Bellac, CEO, Videomenthe

"The industry is facing challenges, with new players and exciting technologies coming into the traditional game. We have to reinvent technical and sales models to adapt to these changes. More than ever, we really think content is the key and the industry has to count on reliable solutions to manage it.

At IBC this year, we'll present a brand new version 6 of Eolementhe, our collaborative media toolbox, which combines professional features in an intuitive interface (transcoding, quality control, audio analysis, speech-to-text, subtitle insertion, AI, etc.).

This version 6 reflects a desire to industrialize the solution, incorporating features designed with the constant goal of simplifying work for users and making workflows more seamless: microservices architecture, enhanced AI features, user experience optimization, multilingual subtitling with a mix of automated tools and human resources.

Eolementhe is actually a comprehensive offer that answers today's industry challenges, and connects the different clients and industries (corporate, radios, broadcast, publishing….).

DACH

The IABM Executive Summit in Cologne in June (the day before AngaCOM) was supported by DACH Council Members and was extremely well received by the 40 delegates that attended. The content was particularly engaging and there was some animated debate around OTT with end-customers in the room from BBC and NLZIET.

I am pleased to announce the newly formed DACH Members' Council now has a Chair – Alain Polgar, Managing Director, MediaSTRAT. Alain says, "Now that the Council is formed, I look forward to defining a plan for action for 2020 including some event milestones, new member additions and PR towards the vendor and customer communities."

Jochen Bauer, Director Sales & Marketing, Guntermann & Drunck, a long-time supporter of IABM through EMEA Members' Council and now the DACH Members' Council, shares his views for IBC2019.

"IP is with us but it still has a long way to go. With most classic systems still 100% viable, a costly switch to IP using today's processes could actually mean a loss of efficiency. That's why there's a lot to be said for maintaining the status quo.

"However, when networks handling 40 up to

100Gbit/s are possible with high bandwidth IP systems, it's hard to ignore the IP advantages. That's why we at G&D remain in a hybrid world. By supporting and developing our range of KVM-over-IP™ products and systems, we can offer our customers the best of both.

"As our customers know too well, IP is only one of several challenges facing our industry. Trends that do not directly affect us include video on demand and ever-changing viewing habits. A trend that definitely does affect us is the introduction of new video formats such as 8K. We are responding to these challenges and constantly developing our products to ensure they meet our customers' ever-evolving requirements.

"Though we are always keeping an eye on and preparing for the future, we are still committed to meeting the broadcast industry's needs of today. All of our ControlCenter systems come with the latest in-house HDIP compression technology, which allows a lossless transmission of video signals with resolutions up to 4K at 60 Hz."

At CABSAT 2019 there was an eSports pavilion
– the MENA region's first ever eSports forum,
an indication of its growing importance

MEA region update

Hassan Ghoul
*Director of MEA,
IABM*

The hot season is in full swing in the region and business activities have slowed down as people travel outside the region looking for cooler weather.

IABM members are feeling the pinch of the summer slowing of activities coupled with the slow market situation which has been prevailing for some time. It is expected that activities will come back to normal soon with the school season starting and people returning to the region. Everyone is hoping to see some improvement in the market situation. Although projects are being implemented, the main issue however remains the difficulties in the collection of payment.

On the occasion of its ninth anniversary, BroadcastPRO ME organized a networking event on 24th June, under the banner 'Women in Media'. The event was attended by more than 120 broadcast and media professionals.

ASBU:
I participated in a conference call of the ASBU Academy Consultative Council on 3rd July. The main topics covered during the call were:

- to update the Consultative Council Members on progress in ASBU Academy activities

- to exchange comments on 2019 executed and forthcoming training activities

- to get Consultative Council Members suggestions for 2020 training program

Eleven training sessions were held between January and April 2019. These 11 sessions registered a total of 153 participants from 19 organizations representing 16 countries. The remaining training activities for the second half of 2019 will consist of 16 further training sessions.

Following the recommendation of the Consultative Council, the Academy added in its 2019 training program and developed the suggested training session on 'Audience Measurement in Radio and Television' to be held on 1st and 2nd of October 2019.

The next Consultative Council meeting is scheduled for 3rd October 2019 in Tunis at the ASBU Headquarters.

We're expecting ASBU's response to our proposal for offering IABM's e-learning courses to the ASBU members. Due to the holiday season, we expect to receive ASBU's feedback in September.

ASBU Academy Facebook and Twitter accounts have been online since February 2019:

twitter.com/ASBUAcademy
www.facebook.com/ASBUACADEMY/

Every minute in 2017, Spotify added 13 new songs,
Wikipedia users published 600 new page edits,
Instagram users posted 46,740 pictures

Business Transformation – Embracing SaaS
IABM Executive Summit, London – July 2019

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What are the challenges, issues and potential benefits for both media companies and vendors as they transform to a software-as-a-service based mode? George Jarrett reported on IABM's July 2019 Executive Summit for IBC365, reproduced here with the kind permission of IBC.

Every minute in 2017, Spotify added 13 new songs, Wikipedia users published 600 new page edits, Instagram users posted 46,740 pictures, Netflix viewers streamed 69,444 hours of video, and YouTube users watched 4,146,600 videos. That's why the media and entertainment industries are progressively moving to the cloud. As more cloud solutions are adopted, the simplicity and scalability of cloud-native software-as-a-service is becoming an increasing driver.

Telestream CEO Scott Puopolo kicked off the Summit with a look at the values and issues around Software-as-a-Service (SaaS), and other key contributions came from executives with Singular.Live, Exponential-e, Cerberus, and MediaSaaS at the IABM Executive Summit on Business Transformation in London.

Puopolo entwined the promise of SaaS in with the competition for, and the expectations of consumers, reacting to industry changes, and all else in a flooded market. "Cloud is not as pervasive as expected it would be, so what must the SaaS providers do in order to address the opportunity to help the media business accelerate the transformation it must execute?" asked Puopolo. Summarising the talk in media corporation boardrooms he said: "It is about maximizing the return on every content minute. But what we see is a massive fragmentation of consumers; the narrower those market segments are the more valuable those eyeballs become," he added. "That is why content companies are producing so much more programming, but they cannot negate the ability to deliver a quality experience."

Content must be delivered minus buffering and video quality inconsistencies. Quality represents the "table stakes for media companies delivering competitively, and they are also focused on agile innovation," added Puopolo. "They have got to try and fail. Both operationally and from a cost structure perspective they must have the ability to try quickly and fail quickly."

Cloud was supposed to help
The 'give it a shot' and 'run with anything' successful gambit is matched with an incredible amount of content that can be re-purposed and re-monetised. Build it once and use it many requires agility, innovation and fast turnaround, claimed Puopolo, but "what we have is a fragmented and maxed out market with revenue flat for a lot of content providers. It is competition for every single subscription dollar and every single advertising dollar."

This points to staying agile and reduced operating costs. "Cloud was supposed to help with all this. It provides infrastructure that you can leverage dynamically, and you are not spending stranded capital," said Puopolo. "And you leverage somebody else's infrastructure where, when and as much as you need it. What we have not seen happen is the multi-

step, multi-location workflow processing. It is the core of a lot of media processing, and we are not seeing that transform quickly. In fact, that is what's scaring the heck out of a lot of our users."

"We haven't seen multi-step, multi-location workflow processing. It is the core of a lot of media processing but it's not transforming quickly... that's scaring the heck out of a lot of our users."
Scott Puopolo, Telestream

The issue of getting what you do today to a cloud environment creates fear of risk. Puopolo explained that he doesn't expect to see 100% migration soon, due to the risks to workflows. But the industry is on the path towards the cloud and "they absolutely will get there." Part of what the software and SaaS industry must do is address these concerns, he added. "It is about providing low risk migration paths to cloud optimised business. It is about optimising the return on every workflow and every business process and aligning video minute cash inflows with outflows."

Trying to build out SaaS platforms

The IABM Summit also included a SaaS vendor panel, where Cerberus CEO Chris Clarke explained his business model. "We currently offer infrastructure as a service instead of SaaS, but we are building our own craft portfolio. We will be a SaaS vendor in offering that up to the rest of the industry in a set of software services to deliver linear content," he said. "Now that the platform is there, those services that are available to us in a SaaS model are easier to integrate and offer to our users."

Mark Ward, the marketing director of Singular.Live, had the huge benefit of working in high end TV graphics for 25 years. "The traditional methodologies for uploading graphics to video were not viable in the new content world, so with collaborators we have developed a platform which is entirely web based (HTML), and it allows anybody to add overlays to a video stream very simply from a web browser," he said. Users sign up and get access for creating their own graphics, or they can download pre-built options. It is simple to output to a video stream with the help of two control apps. You can also have the graphics render on the viewer's device.

The challenge around performance

Jonathan Bridges, CIO of Exponential-e, works across multiple industries so has a fuller spectrum.

"We are working with a lot of organisations that are trying to build out SaaS platforms and SaaS capabilities, and the mind shift as to how they go from traditional on premise models to cloud models, or to a hybrid of the two is something we see constantly," he said. "The challenge is coupling it all together. I have organizations that have critical business applications in services that have high performance needs that they need to access in multiple countries, and if everything goes out to SaaS and everything is accessed via the Internet, then the challenge around performance comes in," he added. "The way we typically do it is by making sure we offer a multi-cloud strategy."

Alan Pimm, co-founder of MediaSaaS, has targeted traditional legacy broadcasters. He said: "We offer a migration path, and build microservices into key legacy systems. We are looking at the hybrid cloud model, where you move orchestration and browse into the cloud, while keeping your high res material on prem. You need to have

a proper multi-tenant architecture correct from day one. A lot of the traffic companies are looking at moving into the cloud, and it will be a five-year process for them to re-architect."

Cool stuff on the edge

Jonathan Bridges then ran his own session on increasing digital capability, as learned from 60 transformation projects he has overseen. "There is a lot of cross pollination that comes from different industries, and when we thought about this, we tried to put it in context in three areas. And the Edge has all the cool things: look at the top of the hype circle, and you are going to see lots of edge technologies that people talk about," he said.

Bridges claimed that transformation of the core "does not get mentioned as much as that cool stuff on the edge," so the industry started to build out next generation 'killer apps' but without consideration of the core. "So when you start to think about the SaaS landscape, and about different mechanisms that sit in that space, we ask why people are going to SaaS. There is this perception of agility and flexibility that sits with that," he continued. "But we know that the consumption models are very vendor specific and vendor driven, so are they really giving you those benefits?"

"Some structured data is where the big growth is."
Jonathan Bridges

Bridges 'always' returns to talking about the aspects of structured and unstructured data with users. "Some structured data is where the big growth is," he said. "That's where the proliferation of information is, so do you manage that and the variety, volume and velocity of data that sits around there? And then we have this operational and utility piece that sits around that, and so how can we outsource that SLA?

"What we have found in the SaaS space is that when we did have everything on prem we had loads of personal productivity apps that integrated things and made them work together, and then we go to SaaS and some stuff comes out of the box and works perfectly," he added. The less happy news comes when people move their CRM systems out to SaaS. "This is obviously very different when compared to say a VOD system," said Bridges.

Look at these paradigms
This brings in the challenge of productivity integrations, and Exponential-e has a special integration software for this task. "It does come up a lot, and then we have that tailorisation that sits with that. If you are looking to go pure SaaS and being able to take something as a standard service then you are really getting into that model where it is going to work out," said Bridges. "If you look at these paradigms, look according to Gartner, and how it would talk. However, systems of record are not that unique potentially.

"Look at the app and go when you do your categorization of that. It can really simply move into a SaaS model: it is very standardized, and you don't need much change," Bridges added. "And then we have got the systems of differentiation that sit there. Can that be delivered by a pure based SaaS solution? Maybe, maybe not." It depends on how tailored that is, and it is the systems of differentiation that make Bridges' company unique. "The biggest challenge I have when talking to customers is helping them be unique from their competition," he said. "And then we have systems of innovation, and this is where the cloud market is based, and cloud native applications have become this unique piece, where people are taking bespoke apps that were coded years ago and they try to integrate them so they become the next killer app or next killer service. You need that flexibility of change."

Some cores may consist of hundreds of Terabytes of data that nobody would put into the public cloud. Another issue for Bridges is the network. "When you think about your network, and we are all in SaaS on all these locations, if we have people accessing SaaS services in multiple regions we don't want a traditional MPS network where everything is coming back to the core then going to the Internet," he said. "So we want to be able to use things like software-defined WAN. One of the reasons for SaaS is getting the right cost efficiencies. If you can underpin that and have something that constantly tells you that you can actually move your infrastructure, your app, your workload between clouds, effectively you have automated it."

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North America region update

Kathy Bienz
*Director, North America,
IABM*

New! IABM Technology and Trends Roadmap©
With the industry in steady flux given the many 'spinning plates' of emerging standards, technologies, workflows and business trends, the new 'IABM Technology and Trends Roadmap©' can be a highly valuable resource to assist both internally and externally in business endeavors.

We did a sneak peek of the roadmap at NAB and it can now be downloaded:

www.theiabm.org/media-and-entertainment-technology-and-trends-roadmap/

The roadmap aids both vendors and buyers in developing their technology and business strategies. An industry-wide group of IABM members and technology buyers collaborated to incorporate the major current and unfolding technologies and trends, which are mapped onto the standard technology adoption curve which ranges from 'Bleeding Edge' to 'Commodity' in each of the five main blocks of the BaM Content Chain®: **Create**, **Produce**, **Manage**, **Publish** and **Monetize**.

For your collaborative discussions during IBC, hardcopy roadmaps will be available in the IABM Hall 4 and Hall 8 Member Lounges.

	BaM°	Bleeding Edge	Early Adopter	Mature	Commodity	Synopsis
AI/ML- Analytics	Create Produce Manage Publish Monetize					Beyond speech-to-text and fac with confirmation bias issues w benefit balance between acce IABM research shows adoptio
Imaging HDR, 8K, HFR (not VR)	Create Produce Manage Publish Monetize					The consumer side still contin to a practical size. Outside of for "better pixels" rather than r
Immersive Immersive video and audio	Create Produce Manage Publish Monetize					Struggling with business mode the broadcast and media indu immersive audio techniques a
Blockchain	Create Produce Manage Publish Monetize					It's not about currency; it's ab services and content aggregat in managing and monetizing c

Upcoming North American Events

As the summer winds down in North America, many companies have been focused on final pre-IBC preparations. It is shaping up to be another excellent IBC and you won't want to miss IABM's events and latest technology/business information that will be shared (see other article on IABM's activity during IBC).

Following IBC, we will continue to provide great resources and access to IABM member benefits at three important North American events: NAB Show New York, SMPTE 2019 Conference and the third and final 2019 IABM Executive Summit in the U.S.

- **NAB Show New York (Oct. 16-17):** Join us the first morning before the show opens at our annual State of the Industry Breakfast where we will share the latest research released at IBC. We are also finalizing the topics for the presentations and panel discussion part of the program with industry experts. Visit our Member Lounge located in N1043 to have a meeting/conversation, schedule a video interview if you missed out on an IABM-TV film slot at IBC, or simply take a break.

- **SMPTE Conference (Oct. 21-24):** For the first time at the Conference, the IABM will have a booth (#612) to be a resource to both existing and prospective members, providing literature, business intelligence and other information. This is the final opportunity for members to do their annual IABM video interview.

- **IABM Executive Summit (Nov. 18):** The Summit will dovetail with Streaming Media West (Nov. 18-20) in Los Angeles. We are planning an enlightening event where you will hear from leading industry providers and end users with targeted presentations and lively panel discussions.

Watch the 'Events' page on the IABM site for detailed updates and to register your attendance!

OTT Update for North America

OTT solutions will be on display during IBC which broadcasters, media companies and content providers will be examining closely as they evaluate options to further distribute and monetize valuable content. The information below is extracted from the most recent IABM North America Regional Research Report (full report covering major developments and trends in the region is found on the IABM website).
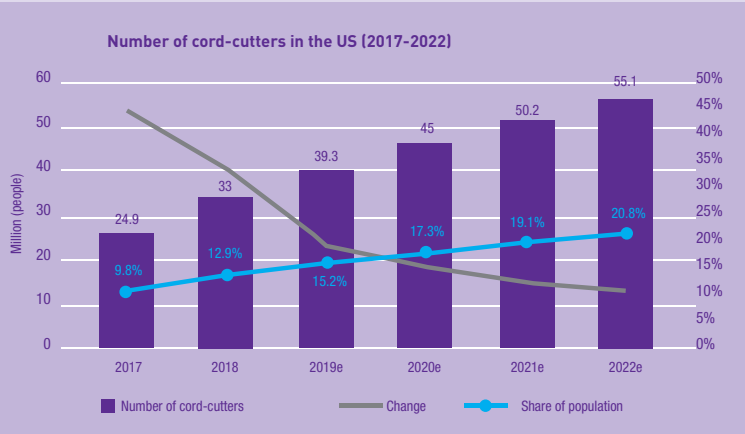
"The emergence of OTT is now radically changing this traditional model, and the broadcast industry in North America is now in the midst of a radical transformation. It is stepping into an 'OTT 2.0' era, where media companies are harnessing the OTT lessons learnt over the past few years of experimentation and reshaping their business models to increasingly deliver their original content direct-to-consumer (DTC), bypassing traditional means of distribution. According to The Diffusion Group, all 'major' TV networks in the US will introduce standalone DTC OTT services by 2022, driving total DTC subscriptions close to 50 million by 2022. Moreover, Akamai estimates that over 50% of publishers view DTC video services as a primary or secondary revenue source. Hence, broadcasters' DTC initiatives are crucial, as cord-cutting continues to outpace projections.

In the context of rapidly rising competition, media companies are increasingly focusing on original content investment and trying to find ways to deliver new services as efficiently as possible. Competition from powerful OTT operators such as Netflix, Amazon and Hulu is pushing broadcasters to launch their own OTT offerings to reach out directly to viewers – particularly the millennials – whose tastes increasingly run to mobile and social offerings.

Pay-TV operators have responded to fierce competition by announcing smaller, cheaper 'skinny bundles' of

See IABM at: NAB Show New York, SMPTE
2019 Conference and the third and final
2019 IABM Executive Summit in the U.S

content packages priced lower than their traditional offerings. In addition to video-on-demand (VOD) services, new formats and strategies for monetization are gaining ground, and the fragmentation of content presentation and consumption continues, as devices proliferate and diversify.

Pay-TV penetration has declined in the US recent years, particularly due to the high costs associated with Pay-TV subscriptions. Pay-TV profit margins continue to erode as programming license fees increase far ahead of subscription rate increases. According to eMarketer, the number of American adults who have stopped subscribing to traditional Pay-TV services (i.e. cord-cutters) grew by an estimated 33% to 33 million in 2018. In total, there were 186.7 million Pay-TV subscribers in the US in 2018, which was 3.8% less than in 2017. The chart below illustrates the long-term trend of declining number of Pay-TV subscribers in the US.

Number of cord-cutters in the US (2017-2022)

Year	Number of cord-cutters	Share of population
2017	24.9	9.8%
2018	33	12.9%
2019e	39.3	15.2%
2020e	45	17.3%
2021e	50.2	19.1%
2022e	55.1	20.8%

Legend: Number of cord-cutters — Change — Share of population

As a developed broadcast and media market, North America's transition to digital broadcasting and HD have reached maturity with technology spending now focusing on multi-platform, IP, AI and cloud-based technology – however, HD spending has not halted as demonstrated by recent HDTV channel launches. The rollout of the next-generation terrestrial standard, ATSC 3.0, by broadcasters in the US is also expected to drive spending, particularly with regard to transmission-related equipment. This will provide broadcasters new tools to reach consumers in a multi-platform world although there may be some constraints preventing the standard taking off immediately – a major one being consumer adoption of compatible equipment.

The emergence of OTT and adoption of new direct-to-consumer business models naturally changes media companies' content delivery strategies. Accordingly, broadcasters and media companies are seeking to

increase their operational efficiency by deploying IT-driven solutions. Large US broadcasters like Fox and ABC-owned ESPN have built new facilities based on IP rather than traditional broadcast products. Already in 2015, Disney and ABC announced during the NAB Show that they will virtualize their master control infrastructure to be able to playout from the cloud and to provide pop-up channels. In 2018, Telemundo opened its new headquarters in Miami, with its infrastructure based on advanced IP technology (ST 2110).

During 2018, OTT and new media offerings continued to grow in North America, and the region is the OTT industry leader globally. North America constitutes a developed broadcast market with a solid broadband infrastructure. OTT TV & Video Forecasts estimate that 73.5% of TV households will subscribe to at least one SVOD platform by 2023.

Leading streaming services in the region are concentrating on increasing their customer base by providing content through different channels as dedicated OTT services and smartphone apps. Furthermore, the United States and Canada have huge budgets allocated to the creation of animated content.

EMarketer projects that by 2021, 51 million people will have ditched their cable or satellite TV subscription plans. YouTube and Dish Network's Sling TV are two of the main reasons for the expected drop.

Niche OTT providers are a new trend in recent years. They are specialized streaming services which provide content to small but passionate audiences who share an interest or a hobby. Those niche services offer flexible and inexpensive pricing plans to compete with giants like Netflix and Amazon. Furthermore, they build online communities by tailoring their content to specific demographics. Kun Gao, CEO of Crunchyroll, one of the niche streaming providers said: "Niche OTT services offer everything for someone, rather than something for everyone."

Niche OTT viewers can watch movies and series from drama to manga, and from opera to romance. Sports leagues and federations are thinking about launching their own OTT platforms to offer a flawless user experience and niche value to viewers.

It seems like there is still more room for niche services in the crowded OTT market; the challenge is to find and meet a real demand for a particular genre of content. Once achieved, viewers definitely appreciate the curated libraries and specific genres offered by niche OTT services."

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Innovation in full flow across the BaM Content Chain® – the future is bright!

John Ive
Director Strategic Insight, IABM

The evidence of industry change is all around us and the Broadcast and Media (BaM) Content Chain® has been developed to reflect those changes and to be inclusive of emerging new products and services. IABM is perfectly positioned to observe these changes with its various activities such as market research and biannual BaM Awards® at IBC and NAB. But more than that, IABM can act as a catalyst and support for change, helping existing organisations to adapt and new ones to flourish.

The IABM BaM Content Chain® consists of nine categories; the definitions of each can be found in detail on the IABM website. This article seeks to highlight the drivers of change and the key developments in each of those nine categories. As we found when judging the IBC edition of the BaM Awards®, there is no shortage of new developments in each category, with a record number of entries – in total approaching two hundred. Looking across all those entries in my role as chair of the judges has reinforced IABM's other research on where the innovations are in each content chain segment.

So first let's take a look at **Create**, the first segment in the BaM® Content Chain, associated with the original acquisition and creation of raw content. Without raw content there would be no industry, but it goes beyond that to the need to capture in the highest quality, enabling more content with greater efficiency and at lower cost.

At the highest level we see the drive to achieve practical and economical UHD and HDR acquisition – exactly the same kind of transition we experienced with HD. Beyond that, work continues developing virtual reality, avatars powered by human movements and 360-degree experiences. Cameras come in all shapes, sizes and budgets encouraging more low-cost productions for online consumption or to serve niche audiences economically.

Sports is a big driver of innovation and with more cameras and more formats used in production, AI driven automation and scene selection is helping to keep the

operational headcount down to manageable levels.

Finally, in the Create category, mention should be made of remote production. By keeping more of the production equipment and team in a single, centralized position, significant efficiencies can be achieved. The Cloud is also helping in some instances by providing the central hub for access to the acquired material.

Moving on then to the next step **Produce**, this is where the Cloud once again plays a major part, especially in collaborative projects or productions where the teams are geographically split. Many of the limitations that previously ruled out this form of working are fixed or at least much improved. In order to simplify access and maintain simplicity for users, web-based interfaces are becoming common, especially for simple editing.

At the presentation level, creatives are always looking for ways to keep audiences engaged and with this in mind, new on-screen graphics are set to grab professionals and consumers. Once again Artificial Intelligence has a part to play, in addition to interactivity with consumers selecting the kind of information they want to see and much of it automatically generated.

Finally, in this section should be mentioned all-in-one production solutions. Traditionally we consider production tools as a series of standalone boxes from the camera to delivery. In order to cut costs, simplify operations and broaden the market for these tools, the all-in-one software driven production tool is doing just that. From camera to live streaming needs just one box

and one interface. In fact, very soon that will also be in the Cloud, so no more than a simple hardware interface and a web browser is all that will be required.

For the IABM BaM Awards® at IBC, one of the biggest categories was **Manage**. This category is defined as: "Managing and preparing completed content (audio, video, metadata) for publication and subsequent archive, including normalization, localization and technical/editorial compliance, while orchestrating the workflow and resources required". As can be seen from this description Manage has a broad mandate, which is not surprising with systems becoming more complex and resources assignable on demand.

Orchestration is a key word in this category with the management of content and associated data growing in complexity, with an ever-increasing number of channels and personalization. Automation is also a key word here with tasks that would consume considerable human effort being run in the background automatically. Finding the right associated data and linking it to the content and preparing multiple versions is certainly part of this category. Added to that is the need to find the quickest and most efficient use of resources.

Not surprisingly Artificial Intelligence and the Cloud are again major players in this category. Managing metadata about content and creating metadata that didn't previously exist for content libraries, represents an important management component. Searching for assets either in local storage or in the Cloud should

become a lot easier especially where multiple incompatible storage locations exist; many of these solutions pride themselves in spanning disparate resources and providing a unified representation. The key here is to present users with a user-friendly interface that hides the underlying complexity, describing the tasks that need to be done and then executing those tasks automatically. This applies to finding content and making it available in the right format, the right associated personalization, data and graphics.

Publish represents the last stage in the professional chain before Consume. It includes both traditional broadcasting and ever-growing on-line distribution.

Much of the current action is in the on-line domain with several topics coming to the top as important. Security is one and new developments, increasing the level of security while maintaining consumer convenience, compatible with new lifestyles in the home, office or out and about.

Latency is a major concern with many innovations highlighting lower latency. This is an important consideration for sports and on-line interactive services. New developments highlight the improvements in this area, further reducing the performance differences with traditional broadcast.

More efficient use of networks and bandwidth is work in progress, with distributed local caches and peer-to-peer consumer networking offered as some of the many improvements. Finally, as the focus turns to Internet delivery, we see one more totally new initiative with developments in 5G broadcasting starting to emerge. It's early days but certainly one to watch.

None of the other eight categories would exist without funds to invest, thus making **Monetize** a really important category. There are several aspects; first understanding consumer preferences and trends is vitally important, so there is much attention paid to analytics and insights, once again often AI driven. Then we have the input and output of Monetize. The input consists of selling airtime, usually associated with advertising but can also relate to programming too. Once sold, the management of those sales and making the right connections to consumers with personalization is key.

In traditional broadcasting all viewers received the same commercials whether they are relevant or not. For a high percentage, they are not relevant and wasted 'eyeball' time. With personalization, multiple different ads can be addressed to different audiences, making them more effective and selling more advertising space for the same sized audience.

To make this whole process even more effective, a similar effort is required in scheduling programming to a level of sophistication that far exceeds on-air broadcasts of former years. Matching commercials to specific programming, attracting and retaining audiences, targeting specific demographics through recommendation engines is all part of this.

The **Consume** category is an interesting one to watch because we are seeing a transition, the direction of which is not clear to predict right now. As more content is consumed on portable devices it would be reasonable to assume that the Set-Top-Box is in decline. Today, it's still a major part of the consumer world and many providers like the total control this approach offers. The next level is downloadable 'Apps' which many of us would consider a relatively recent development but even these are being challenged by browser-based solutions. There is ongoing debate over the browser solution – whether it should it be driven by downloadable plug-ins or native web browser solutions.
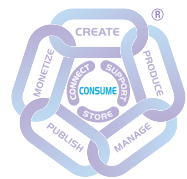
The user experience 'UX' is key here. Beyond passive viewing there is interactivity to be considered and beyond that programming that majors on video participation from the audience. As the consumer is the final arbiter of what matches their lifestyle, it will be interesting to see how these various options evolve.

The user experience 'UX' is key here. Beyond passive viewing there is interactivity to be considered and beyond that programming that majors on video participation from the audience. As the consumer is the final arbiter of what matches their lifestyle, it will be interesting to see how these various options evolve.

All of the categories depend upon the movement of content between facilities and that's where the

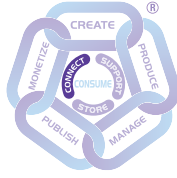**Connect** category comes in. Typically speed and latency have been major concerns and an area for improvement. This challenge is heightened by the desire to acquire content from anywhere in the world at short notice, often in less well-connected locations.

There are many Cloud solutions, the development of which has been slowed down because of the challenge of getting content in and out at speed. This includes HD and UHD multiple streams in real time. Currently there are workarounds which are promoted as the way forward but there's scope for more ambitious solutions.

The move to IP-based in-house systems is a stepping-stone to growth in wide area networked solutions. Also, the desire for remote production, as mentioned earlier, is driving demand for high speed connectivity.

File transfer acceleration has featured for many years and is a topic that's maturing. Beyond the pure connection, end users are demanding greater compatibility and opportunities to move content between competing Cloud storage solutions; being tied in to one solution is not seen as a wise move – especially as each Cloud service has different storage and processing options, with users wanting to access the most appropriate service that suits their needs.

On-premise, off-premise, or the Cloud are all storage options at the heart of the **Store** category. Most suppliers recognize that end users have different preferences. Although Cloud storage has many compelling arguments, not everyone is ready to take that risk, so in many cases solutions can be provided with all three approaches or a hybrid of them.

There is still a need to manage different storage supports from tape (yes tape is still in use!) to hard drives, to solid state memory.
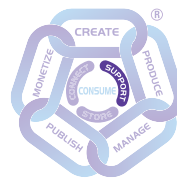
Storage currently is much more than a hard drive, files and a file system. Metadata associated with each storage object is vitally important for indexing, searching and retrieval. The management of storage and the content is as important as the physical support itself.

In terms of performance, post-production drives the need for speed. Previewing multiple streams of editing in real time at UHD quality levels, is a real challenge for storage and processing systems. At the other end of the spectrum, portable stand-alone storage is also of interest for content acquisition on the move.

The **Support** category covers a wide range of products and services aimed at keeping complex broadcast and media systems running and operational. One of the key elements is the ability to monitor the health of a system and take action as and where it is needed. This sounds obvious but with complex networked environments spread over worldwide locations, it is indeed a major task.

Many companies talk about their ability to distribute 'software probes' which can report back to the control centre the status of the environment they're monitoring. This would normally be associated with an extensive IP infrastructure. In the production environment, many background systems that make operations possible are in this category. Examples include KVM systems for video and data and talkback systems. Although both mature applications, there is considerable innovation still to come especially as IP-based solutions expand.

The support category also hosts many services. One of the highest is computing power, either in the Cloud or on premise. Finally, as complexity grows, many organizations rely on external consultancy services to design and manage their new installations; growth in this area also comes under the Support category.

The Future is Bright!

As someone who was deeply involved in helping to make the digital era happen as the industry transitioned from analogue and feeling at that time we had found the ultimate solution, I can now confidently predict this new era, which is in its early stages, will take us to possibilities no-one can envisage right now.

Over the next few years we will be watching the maturity of the new IP and Cloud based systems and then start to envisage the next big thing. But for now there is plenty to get excited about as the industry transforms itself with the new tools available.

Forging the bond between vendor and user

Malorie Delaporte
*Solutions Manager,
Pixel Power*

I want to talk about my vision of the relationship between broadcaster and supplier. So first, here are my qualifications to talk on the subject.

Perhaps because my parents would not let me watch television, I grew up wanting to become a video editor. In 1998 that took me to a public broadcaster in France, where I gravitated towards the presentation department, first as an operator, then presentation manager, deputy in operations, then on to engineering where I eventually led the team. The move to engineering was driven by my frustration at simply managing a world of issues. I wanted to know how it worked, beyond emergency fixes to keep the channels on air.

When this broadcaster moved its facilities in 1999, I was responsible for specifying the upgraded presentation, head end, and helped design Newsroom and post. Later, as the station grew, I got to add more outputs using channel-in-a box solutions, then did it all over again with a refreshed facility in 2013.

My first purchase from Pixel Power was for logo inserters when we went 16:9 in 2009. After a decade of working closely with the company I changed sides, and I am now a Solution Manager at the company. Before giving you my thoughts, I must make it clear that, although my experience is from a particular company, this is very definitely not

about that broadcaster, for which I retain a strong bond.

And while I honestly believe that my new employers are better than most in the areas I want to talk about, this is not a piece which says how wonderful they are.

I see a yawning gulf in understanding between vendors and broadcasters and, despite many fine words, I see little chance of this gulf narrowing. I know that in IABM conferences in the past, very senior broadcast figures have begged vendors to come around to their way of thinking.

There is much I could say, but in the space available to me I would like to make two points, which I hope will help bridge the gap.

The first concerns managing expectations and reacting to technological change.

Promises

For many years now, we have been driven by big new concepts. The need to be visible at NAB or IBC means that trends appear and every vendor has to talk about them, even if they are dangerous diversions. Remember just a few years ago everyone was talking about stereoscopic television?

More recently the buzz has been around virtualization and the cloud, and the use of IT standard equipment in general. The whole IP buzz was part of this, even though it is actually a smaller enabling technology in a much bigger transformation. Let's not get started on 'AI'!

The result of this big words marketing is that discussions around new projects get dominated by technologies, instead of working out what will actually get the job done. More important, it results in vendors making promises they know they cannot keep.

If a customer asks a vendor about the latest big word technology, the tendency is to say 'yes we can do that' because you know that is what the people at the next booth will say. But that really does not help the customer, who may end up ordering something that will not do what they want even if the manufacturer eventually gets it to work, within their own flavour.
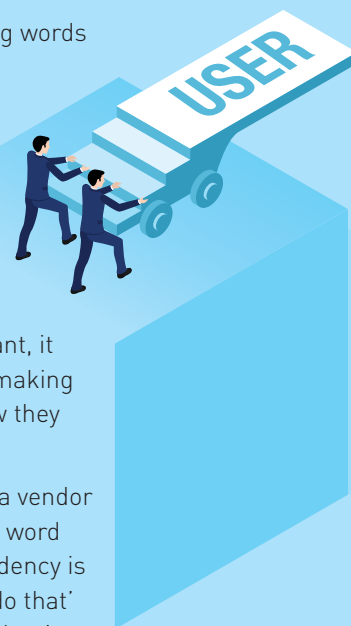
What customers want – and I am sorry if this comes as a shock – is for vendors to say 'no' when they mean no. If they cannot deliver a specific piece of technology, then customers would much rather know that.

The reason that it cannot be delivered might be because the manufacturer has decided not to go down that route for commercial reasons. More likely, it is because it is a good plan in theory but needs a lot more development, by the vendor or by the industry at large. And, in a versatile user consumption, agility, clever and lasting investments are preferable to ever-struggling broadcasters.

The smart sales people, though, will then go on to say when and how it might be available, if it really will help the customer, or they will look for a better – and available – solution to the targeted deliverable.

In turn, that will lead to the real holy grail: an open discussion about what the broadcaster needs to achieve, and how the vendor can make that happen.

I cannot over-estimate this point. The best solution is what solves the problem for the customer, at a price which is within budget, which can be delivered in the right timescale, and which can be installed while keeping the station on air. If it does all that, it really does not matter what the technology is.

Tender

The other point I want to make comes from my background in a public broadcaster, but also applies to other media companies. It concerns tendering for major projects.

Engineers can do all their research, and spend time on all the right booths at the trade shows, and develop a solution they are confident will work. But if you then go out to public tender, you cannot specify your chosen solution. You can hint at how you see things, but you cannot specify vendors or products: that is, under most circumstances, illegal. You have to hope that the respondents have done the same research you have, have come to the same conclusion, and will have an interest in proposing it.

Another element of public tenders is that they are public: whatever you put in them is available to anyone who takes the time to read them. If your project is commercially confidential – perhaps because you are planning a rapid expansion that you would rather your rivals did not know about – then you have to add another layer, a pre-qualification stage for potential tenderers, who can sign a non-disclosure agreement.

This pre-qualification stage also gives you a chance to check the financial and legal probity of potential bidders, too, which is no bad thing. Having a major supplier fail in the middle of a key project is disastrous – so be wise about who you choose.

Coupled with the need to bundle all the elements of a project into a single tender, and the result is that you are likely to end up giving a contract, that is expressed in terms of outcomes rather than technical detail, to a systems integrator. As a broadcaster, you hope that you have a sufficiently strong relationship with the SIs bidding that they will pick the solution you have benchmarked, but you have no guarantee. You may have to settle for the 'least worst' answer, because the tech is only part of the consideration.

The best solution is what solves the problem for the customer, at a price which is within budget, which can be delivered in the right timescale, and which can be installed while keeping the station on air. If it does all that, it really does not matter what the technology is.

All of this takes time, of course, which can lead to frustrations all around. It also means that the broadcaster is essentially losing the technology knowledge because it has been outsourced to the SI.

My plea, then, is for vendors to understand these are critical points for their customers. Acknowledge that the tender process is challenging and time-consuming. You will have to understand not only what the broadcaster needs to achieve, but also the context and constraints that rule them. And then help them find the most sustainable and agile solution.

But above all be honest. You will command respect by saying something is not possible today, particularly if you can talk about what is possible, what is on the roadmap, and what can be achieved in a better way. That is the route to a genuine partnership.

Creative Collaboration: How Red Bee Media and Nenda are adding streaming to room service

Anders Hässel
Nenda, CEO and Founder

One of the strengths of collaboration lies in allowing broadcast-oriented companies to explore new spheres as Red Bee Media discovered working with Swedish streaming specialist Nenda.

Steve Russell
Head of Red Bee Media's OTT and Media Management Services

Red Bee Media, one of the industry's leading managed services providers, has entered into an interesting partnership with Swedish streaming innovator Nenda, which it is hoped will help boost the latter's attempts to disrupt the global B2B Television market. As a result of the deal, Nenda utilises Red Bee Media's Managed OTT and Distribution services as the back-end to its own platform that provides the hospitality industry with a next generation television experience in hotel rooms worldwide.

The service offers hotel chains a cost efficient, content rich and highly customizable streaming service integrated with booking systems and loyalty programs. Guests will, for example, be offered personalised channels and content based on the country from which they are visiting, as well their individual preferences, which are stored on the system and can be loaded whenever and wherever they log in.

It's a powerful proposition which, as Nenda CEO and Founder, Anders Hässel, explains significantly updates an industry whose media entertainment systems seem to be rooted in fairly ancient technology. "Even in the most modern hotels the TV offering is often the same as in the 90s, where the guest has to flip through dissatisfying content in a foreign language, which leads to frustration rather than an entertaining experience," he says. "We want to change this."

The challenges involved in the project were both business-oriented and technological. Historically there

have been a few strong operators in each geographical location who have been able to build large customer bases over a long period without any new competition due to high entry barriers relating to capital intensive infrastructure investment.

As many broadcasters are very aware, streaming disrupts this model by allowing market entry with much lower set-up costs. However, Nenda also faced the challenge of launching its service from a standing start, initially blocking the route to any economies of scale. Addressing that needed some creative thinking.

> *Red Bee and Nenda worked together closely to enable a mutually beneficial partnership model which enables Nenda to have access to state-of-the-art technology from the beginning with a scalable cost structure*

"Red Bee and Nenda worked together closely to enable a mutually beneficial partnership model which enables Nenda to have access to state-of-the-art technology from the beginning with a scalable cost structure," explains Hässel.

As Steve Russell, Head of Red Bee Media's OTT and Media Management Services says: "We've been talking to Nenda for quite a few months. They were looking for a partner that 'got' their business plan and had a solution that was flexible – both technically and commercially. As a startup with growth ambitions they needed to know that their partner could scale as demand grows."

"The Red Bee offering includes a full suite of back-end technology offered to Nenda as a flexible and scalable service, enabling us to have a lean technology operation reducing capex and operational complexity," explains Hässel. "Red Bee also has the advantage of providing

an extensive channel store and transcoding capabilities with global reach and presence, which is a perfect fit for Nenda's global ambitions within the B2B industry."

Red Bee essentially provides all the back-end services to deliver video to screen. Nenda leverages the company's Managed OTT platform, which is multi-tenanted and carries linear, live, and on-demand services, as well as the capabilities to manage 'product' packages such as day-passes to access content. It also takes advantage of what Russell refers to as Red Bee's 'Channel Store', which routes linear TV channels around the world. "That enables us to carry the linear TV sources to the Nenda platform – and these can grow and extend over time," explains Russell.

"The Nenda front-end application utilises the Red Bee SDK to create a secure connection to the Red Bee back-end platform," he continues. "That takes care of authentication of the user, checks whether the user is entitled to watch the desired content, and creates an encrypted secure stream of the content to screen over a CDN. Our OTT platform was designed to work across many different use cases so in many ways this is business as usual for us."

The technology challenges were equally important to address and highlighted the fact that such a specialised streaming service is different to the standard B2C streaming implementations. Happily, the Red Bee platform is micro-services based which means that it is very straightforward to extend and add

new components to such as, in this instance, set-top boxes. "It's always evolving," says Russell.

"If reliability and quality of service is important in B2C, it is even more important in B2B," says Hässel. "Just imagine the lost customer lifetime value for a hotel chain if a customer changed to a competing hotel chain due to TV down time, or the cost of compensation for an unhappy guest. Also, data models and information flow between different systems are different and integrations towards hotel systems are necessary to enable a smooth customer experience and journey throughout the stay."

Nenda has ambitious goals, stating that the hospitality industry is only the beginning of its plans. Sports bars, care and welfare facilities, medical establishments and more are all on its radar, and the collaboration with Red Bee means that it has the resource and the back-end to go after them.

"The front-end of course needs to be localised in terms of language, payment solutions etc, but also needs to be easy to navigate and preferably an interface that all geographical markets recognise and feel comfortable with. From a back-end perspective, the global scale of the service needs to be managed. Just imagine all the content for different regions, customers, localisation and so on."

For Red Bee, Russell is sanguine about the prospect – so wherever Nenda wants to go, we feel we can be right behind them. "We're a global operator which helps. That's the beauty of the partnership."

Insolvency: Recognising the warning signs

There are a number of warning signs that a company is in financial distress and action is required.

Lucinda Meek
Finance Director,
IABM

Insolvency isn't always avoidable but the chances of doing so are always improved if action is taken early and rapidly to give the company the greatest opportunity of trading its way out of difficulty. The warning signs can be singular but usually accumulate in a financially poisonous cocktail and it is important that directors and company accountants are prepared to recognise them.

Warning sign # 1: Creditor Action

Many companies and businesses occasionally miss payments; however, if this begins to occur frequently, it suggests that a business cannot meet its liabilities as and when they fall due.

This is especially the case when arrears of employment and sales begin to accrue. Tax agencies are never pleased about being used as unofficial bankers and failing to pay tax when it's due is the number one reason why Directors may find themselves responsible for a company's debts when it goes into insolvency. Directors are expected to know that continuing to trade with the knowledge of insolvency can have ramifications for them personally and it is important that they take professional advice from a licenced Insolvency Practitioner or to at least speak with their accountants.

Warning sign # 2: Cashflow

Most businesses suffer periodic peaks and troughs and in these circumstances, cash becomes king. Naturally, if the business is continually spending more than it earns, it will lead to financial problems. When facing cashflow difficulties, directors very often either try to increase their overdraft facilities and/or introduce personal monies either from their own resources or family and friends. While this may alleviate current cashflow difficulties, it doesn't necessarily address the cause of the company's cashflow issues.

Warning sign # 3: Falling Margins

We live in an extremely competitive environment and in most businesses profit margins are under more pressure than at any time in history. Sales are critically important but it can be said that while turnover is vanity, net profit is sanity. No amount of turnover can compensate for a lack of profitability and if margins are being squeezed, it suggests that the costs and expenditure are too high and the sale price of goods to the end user is too low. Narrow margins make a business vulnerable to the impact of small changes in other areas of its operations from sales levels, the cost of raw materials, interest rates and even the impact of staff absences.

Warning sign # 4: An increase in Creditor and Debtor Days

An increase in delayed payments to creditors is a sure sign that the business is sustaining financial difficulties and very often leads to restricted credit facilities, poor credit ratings, difficulty getting supplies and increased costs due to lost discounts.

It is also extremely important that you have an effective credit controller who pursues debtors on a regular basis and is able to manage the inflow of debtor monies. When a company is facing financial instability, cash is king.

A company should always have a business plan and maintain cashflow projections on a regular basis but, when facing financial uncertainty, those cashflows should be produced on a weekly basis and payments should be prioritized to ensure that funding levels are sustainable. If choices have to be made as to where priorities are created, that decision process should be documented and signed off by a director and should at least disclose the rationale behind the decision, the cashflow impact and identify a point at which cashflow will be regularized again and payments restored to normality.

Directors need to be realistic about the prospects for resolving issues of cashflow or profitability and however unpalatable it may seem, if losses continue to accrue or cashflow doesn't improve, then they ought to take appropriate action and speak with a business turnaround advisor or Insolvency Practitioner.

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9:00 a.m. - 9:45 a.m.

Sandeep Gupta,
Vice President, Fire TV Devices and Experience,
Amazon Fire TV

Wednesday, November 20, 2019
9:00 a.m. - 10:00 a.m.

Kiran Paranjpe,
Head of Sports & Entertainment/Global Partnerships,
Google, Inc.

Brendan Reiley,
Director, Revenue Operations,
NASCAR Digital Media

Rich Robinson,
Senior Vice President,
Digital, World Surf League

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M&A: Dalet acquires Ooyala Flex Media Platform

David Lasry
Dalet, CEO

Dalet acquires Ooyala Flex Media Platform business to solidify market position in designing and deploying the industry's most sophisticated media workflows, explains CEO David Lasry.

One of the most eye-catching mergers and acquisitions this year is Dalet's scoop of the Flex Media Platform business and personnel of Ooyala. The French-based, global provider of media asset management solutions and services to broadcast and content professionals is highly selective in its acquisitions and intends the deal to strengthen both iconic industry brands.

"Adding the Ooyala Flex Media platform to the Dalet product line-up strengthens our ability to answer the needs of our existing customers who are looking to expand their multi-platform distribution and OTT workflows," explains David Lasry, chief executive officer, Dalet. "Equally as important, the Ooyala Flex Media platform opens doors for Dalet into new business verticals such as corporate brands and telcos, and additional tiers like smaller leagues and sports teams. Brands like Audi or National Rugby League, who are not traditional media companies, yet require media management tools like Ooyala Flex Media platform to better monetize assets. Today, every company is a media business."

The asset deal includes Flex, as well as Ooyala personnel across sales, marketing, engineering, professional services, and support. Ooyala's Customer Success, Technical Support and Environment Management teams will be integrated into the existing Dalet 24/7, worldwide support organization. This larger team, which features a well-established local presence, will be able to deliver even better and more responsive customer service for Ooyala Flex Media clients and the workflows it powers.

"The rationale behind the acquisition is to solidify Dalet's leadership position in managing the content supply chain from production to distribution for a much wider range of media management needs and a much broader market," Lasry underlines.

The acquisition strategy

"Dalet is one of the most established players in the MAM and media logistics space. I think it is testimony of our commitment to lead that we have largely given preference to organic growth over acquisitions. Whenever we have made an acquisition, it is done for very specific reasons; to add a piece that was missing in our end-to-end solution and to better serve our customers.

"For example, when Dalet acquired the Brio I/O platform and AmberFin media processing assets, we not only embraced the team with the expertise to develop the product but integrated the IP with a very clear strategy into our existing technologies. In addition, we recognized the cachet that these brands had in the marketplace and retained it. Each one of those have become fundamental blocks of the global Dalet offering."

Lasry continues, "That's why we are excited about the acquisition with Ooyala. It was made with a similar purpose in mind both in terms of what it brings in product, how that unique product is complementary to our own, and how our joint customer base can benefit from the integration and new service opportunities. Ooyala is a very strong and respected brand that is associated with a singular technical vision and we intend to leverage that in new offerings we bring to market, in particular tied to subscription and cloud."

Dalet shares Ooyala's core values and vision around enabling clients to maximize the value of media assets and provide solutions and services to better create, manage and distribute their content. By joining forces with Dalet, the Ooyala Flex Media Platform will continue to expand alongside Dalet Galaxy five and offer customers flexible and modern technology solutions.

Agile response to dynamic market

To elaborate on that, Lasry explains that broadcasters are having to move faster than ever to evolve business models, particularly in response to overwhelming customer demands for delivery on-demand, to migrate technology stacks to the cloud and to anticipate not just react to changing business and technology developments.

"That was our starting point in talks with Ooyala. We felt that we shared a common view on a vision to drive complexity out of the process for customers and to make media management simpler. Obviously, each company also has its own sweet spot areas of expertise which made the union complementary.

"Dalet is known for its capabilities in handling extremely sophisticated, production-intensive workflows and enterprise-type MAM solutions (such as with Interoperable Master Format). Ooyala is renowned for delivering solutions for OTT distribution that can be deployed very rapidly in the cloud and in hybrid on-premise / data center environments.

"More specifically, the Ooyala Flex Media Platform, which is primarily sold as a subscription/SaaS offering, is an ideal solution for servicing OTT and digital media distribution workflows and is a perfect companion to the Dalet Galaxy five offering in our traditional markets."

Lasry expands, "The combined state-of-the-art metadata management and orchestration capabilities of Dalet Galaxy five and the Ooyala Flex Media Platform will enable media organizations to lower total cost of ownership, improve agility and reduce time to market at a more accelerated pace than they ever been able to achieve before.

"One such possibility is to put Flex seamlessly at the end of a Dalet Galaxy production workflow. In this scenario, content would be produced in Galaxy and then published and distributed with Flex to social, OTT, OVP and other online channels. Another example is Dalet Media Cortex, our recently introduced AI SaaS platform that enables consumption of cognitive services on demand in a pay-

as-you-go model, could very well be leveraged by the Ooyala Flex Media Platform.

"There are a whole range of possibilities to expand and enrich the Dalet-Ooyala offering ranging from remote editing to media processing and elastic transcoding on the Cloud and on-premise/cloud platform monitoring."

World-class workflows, industry-standard ROI

"Fortunately, while the Dalet offering is very comprehensive, it is also very modular," Lasry says. "At the same time, Ooyala's tools and approach have a proven ROI, based on real world case studies. Its experienced team has tremendous expertise in high-level consulting. Together we will be in an even better position to deliver world-class workflows, DevOps and ROI for our customers.

"In addition to the sales, marketing, technical and engineering team, we are keeping the main Ooyala office in London. In the United States and across Asia Pacific, in Singapore and Australia, the Ooyala teams, have joined the existing Dalet offices.

"Ooyala has a very strong presence in Asia Pacific, in particular, and is also a major technology partner underpinning the OTT service of sports teams and leagues. Those strengths go very much hand-in-glove with Dalet's market leading position in broadcast and production.

"The technology path we have outlined is supported by world-class professional services and customer success teams that can provide the know-how and expert guidance on scaling media operations to preserve and optimize the value of our premium customer's investment globally.

"We welcome the chance to talk with you about the challenges and the opportunities that lie ahead and how Dalet can help," Lasry concludes.

Rip-Tie – cable management solutions for the broadcast industry

Peter Rosenfeld
Sales Manager,
Rip-Tie

We spoke to Peter Rosenfeld, Sales Manager at new member company Rip-Tie, about the company's rise to pre-eminence in cable management solutions and how it continues to lead the field worldwide 30+ years on from its inception.

How, when, why and by whom did Rip-Tie get started?

As a manager of a film and broadcast video equipment rental facility, Michael Paul Fennell wanted his products to be the most professionally prepared for this intense, fast paced industry. Frustrated with messy cables and annoying plastic ties, and unable to find any useful options on the market, Fennell set out to solve the problem on his own and came up with the first cable organizer using VELCRO® brand hook and loop fasteners.

He worked on perfecting his invention, testing it on rental equipment and with his colleagues, until he knew he had it right. Little did he know that this handy device would become so popular. We started in a garage in 1985, received our first patent in 1987. We moved into a warehouse/manufacturing facility in San Francisco in 1990. In 2001, we bought a building in San Leandro. Since 1985, it has been a process of continually adding new products, markets and customers for 34 years.

How has the company stayed ahead over the last 30 years – what are the secrets to your continued success?

We believe there are several different things that make for a successful company – all of them important.

Continually improving existing products, solving problems that customers brought to us and turning those solutions into new products. Remaining dedicated to a 'best quality available' attitude in both manufacturing and customer service. Not being content to be a one-product company, we try to be leaders and innovators NOT just re-packagers who buy something cheaply made from Asia and putting it in a bag.

Keeping our manufacturing here in the USA instead of going overseas. Everyone else who came along to compete did it by being cheaper. We were alone in being crazy enough to say we are going to use the best quality hook and loop made here in the US with proven durability and consistency. That is what 'building a brand' was about – giving professionals a product that gave them more than what they paid for.

At the same time, as we entered markets like datacomm, who didn't have a need for best quality we were flexible enough to offer products at a lower price and the appropriate quality for what that application needed. Our strength in that situation was that we stocked everything – all the widths, all the colors, all the lengths, we made up package quantities to suit anyone's needs, the Fire Retardant material, the odd sizes – we kept it all in stock because we knew it wasn't just about pricing. It was about being able to ship what that customer needed that day. That's how you keep relationships with customers – they need reliability and service.

Last but not least... living up to our mission statement... 'everyone who deals with us should have a positive experience'.

Much of your business is through distributors. What are the keys to building successful, lasting distributor relationships?

We started the transition to building distribution in 1995-97. We had a few distributors before that point but didn't really start doing the things you need to do to build distribution until then. First, you have to start referring customers to distributors and not taking every $20 sale

that calls you. Which is hard to do when that's how we
started the company and can use the cash. You have to
realize that you can't compete with distribution if you
want them to promote, stock and sell your product.

Secondly, we started developing programs so that the
decision to add Rip-Tie was easy. Just take #1 or #2,
etc. We had enough history at that point to know which
products were likely to sell better into different markets.
Lighting, Music, Industrial etc. We started trying to do
things to support store merchandising like signs, POP
racks, and catalogs. When the internet came along as
a real market factor we had to start supplying digital
picture files and text and other kinds of support like
linking from our web site. You have to be responsive so
that they can get questions answered about lead times,
drop shipping with no extra fees, and confirming orders
quickly. They have to know that you are 'distributor
friendly' and that any problems that come up are quickly
resolved. We want every distributor we work with to
think…"Rip-Tie – great people, love dealing with them".

Of course – you have to offer margins that make it
worthwhile for the distributors to invest their time
and effort into bringing your products into stock and
promoting them to their customers.

Tell us about the Rip-Tie product range today

We break it down into 5 groups, or product families,
mostly based on cycle life. The original line has the
Rip-Tie pull tab label and is our best quality product
line. Everything is available in multiple widths, sizes
and 14 colors. We know they will last for 10,000 cycles.
There are different versions of the CableWrap as well
as 6 other products for different applications. Another
popular product in the broadcast industry is the
CinchStrap-EG which is useful for cable management
on component racks, and in tools rooms, mobile carts,
vehicles etc. Additionally, we have a very exciting new
addition to this line where we are adding RFID chips
into the wraps that will lock onto the cables with our
patented Rip-Lock attachment. This will bring a 4-part
inventory management solution to a customer with
thousands of cables. First, cable management with a
Rip-Tie CableWrap that is permanently locked onto the
cable. Second, a human readable and bar code label
with a unique 9-digit number. Third, an RFID chip
embedded into the wrap that has a 24-digit number
that includes the bar code number. Fourth, they can
also choose to have a custom printed pull tab with
their company name and logo.

The second group is the EconoSeries which is budget
priced versions of the original line for those customers
who don't need the best quality. They are good for 3000-
5000 cycles and are available in a more limited range of
sizes and colors. Whenever anyone comes to us with a
competing product that is lower cost, an EconoSeries
product will usually be competitive while still being
made in the USA.

The Rip-Tie Lite, WrapStrap, Mini and PLUS products
are the double-sided hook and loop material. The Lite is
a die cut strap that will attach to a cable and then wrap
around the bundle. Systems installers prefer WrapStrap,
which is a tape that can be cut to match bundle size.
WrapStrap is the right material to use instead of nylon

ties, on any kind of digital signal (DSP) cabling like fiber. It is a popular product with a low price point, good for 200-300 cycles.

We sell large volumes of WrapStrap because of the growth in computer networks. Almost everyone has a network now ...hospitals, college campuses, office buildings, new home construction, TV stations, restaurants, airports, sports facilities...everything has digital cabling of one kind or another. None of these installations should have a single use nylon tie on them so the signal isn't impeded by over crimping. WrapStrap adds the benefit of reusability. We have a tough time keeping it in stock.

We also offer RipWrap which is our low-cost alternative to Gaffer tape and can be used with any kind of strapping application. RipWrap saves users hours of labor time removing adhesive residue from cables after a show. It is also environmentally friendly because 20 times less tape waste is dumped into the landfill.

Lastly, due to our long standing relationship with Velcro USA we are the only preferred converter on the West Coast so we do a lot of things like cut and mated pairs of Velcro Brand Hook and Loop as well as selling rolls of hook and loop to people who want Velcro.

How have cable management needs changed over those 30 years – are the challenges any different today?

The growth of digital cabling is the main thing that is different from when the company started.

When we started, people didn't even think of having a reusable wrap on their cables, they used string, rope or tape, or nothing. Now there is a wide variety of different products available – just go to your local hardware store. Mine has at least a dozen different products from a dozen different suppliers. There is a wide variety of choices available.

Rip-Tie has become in large part a B2B operation. Our customer was always a professional who bought our products because they represented a value to the way they made their living. The costs could be valued against the gains in efficiency, taking proper care of the cables and making sure the cables came back to the warehouse.

My own personal opinion is that the core of the business is perfectionists, technicians, engineers and the like who want everything to be neat, organized and efficient

because that is the way they are. The real professionals know that spending money on quality is always the best way to go. We just have to reach more of them, particularly Internationally.

With such a strong and unique idea – but apparently relatively simple to copy, you must have faced competition over the years. How have you managed to remain top dog?

There certainly is a lot of competition out there and some are doing a great job with their own specific products and they all have their own strengths.

We have new designs and new patents. What we have tried to do is remain committed to having a wide range of HIGH QUALITY products and we can offer customized straps and printing, do all the after sale service that some companies require. We continue to innovate and offer patented products that are unique to us.

You've recently joined IABM. Besides exhibition space discounts, what member benefits are most useful to you?

We are still discovering that! We'll see if this article has any impact. Clearly, we have to do more work to take advantage of this opportunity to communicate with an elite group of top-notch manufacturers.

We are looking forward to meeting more people in the IABM community and learning from them.
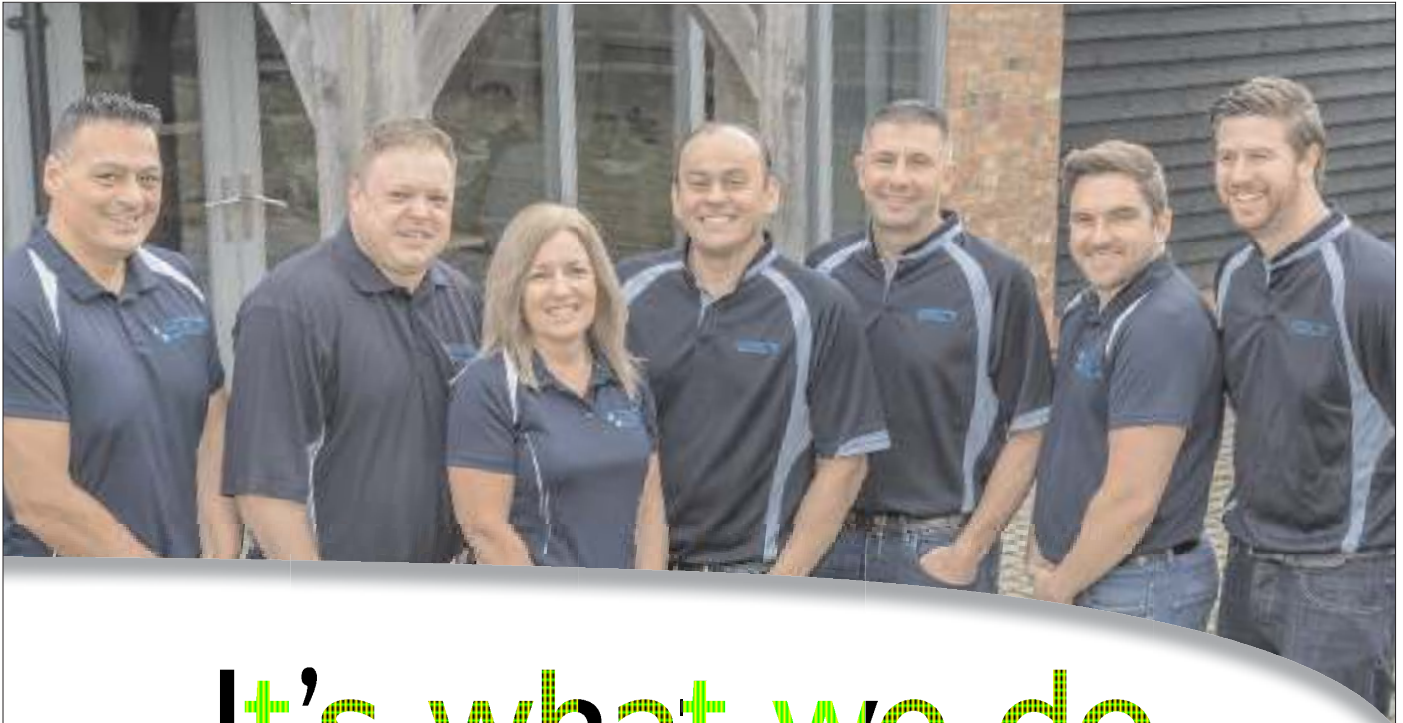
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Embrionix: Enabling the Future of IP

Renaud Lavoie
President, Embrionix

Embrionix was founded a decade ago on a vision of providing the broadcast industry with a simpler, smarter, and more flexible approach to implementing the type and volume of signal processing demanded by evolving technologies and workflows. The company delivered its first product in 2010, made its first large-scale sale into the sports sector, and earned the first of its many patents in 2014.

Since that time, Embrionix devices have become a critical component in high-profile installations worldwide. And, as the broadcast industry began to embrace the idea of IP, Embrionix was ready to enable broadcasters' IP migration.

Simplifying IP, During the Transition and Beyond

Early on, Embrionix understood that broadcast facilities' transition to IP doesn't happen overnight. While some broadcasters opt to make a leap to all-IP infrastructure and operations, most must take an intermediate step in which their infrastructure continues to support legacy SDI equipment. They simply don't have the luxury of replacing a legacy SDI installation with a shiny new IP-based facility.

In most cases, the IP core deployment for a future-proof broadcast infrastructure relies either on a spine-and-leaf type architecture or a simple core switch to establish signal distribution. To interface with surrounding source and destination media devices that are not yet IP-native, broadcasters still need conversion devices to converge to the IP network. As a result, most broadcasters face the costs and challenges of integrating additional hardware and cabling to support both SDI and IP.

In addressing this challenge, Embrionix has taken a unique approach: building miniaturized and field-updatable signal-processing technology into small-form-factor pluggable (SFP) modules that plug into commercial off-the-shelf (COTS) IP switch ports. Leveraging software-defined signal processing, Embrionix today provides its SDI–IP gateway – or any of a host of other IP–IP processing functions – as an SFP plug-in module installed directly inside the IP switch. The location of conversion and processing functions inside the IP switch makes integration simpler and more cost-effective within the existing switch footprint. The fact that processing is software-defined means that Embrionix devices that today support SDI–IP conversion can in the future be adapted to serve the broadcaster's evolving processing needs in an IP-IP processing platform without any hardware change.

The game-changing technology was first shown publicly at IBC2015 in Amsterdam when Embrionix introduced it as the patented foundation for the company's range of advanced SFP solutions for video. In an innovative proof of concept, Embrionix demonstrated the SFPs converting SMPTE ST 2022-6 to SDI and vice versa. The company has since expanded its offering of IP–IP processing options, the newest of which are J2K-to-SMPTE ST 2110, MADI-to-AES67, and audio shuffling and processing.

Taking a Forward-Looking Approach

Replacing an SFP optical transceiver with an Embrionix emSFP Gateway, broadcasters can directly connect SDI equipment to the IP network. Installed inside an IP switch, the SFP can receive or transmit two SDI signals on the connector side and create or receive multiple IP streams to the host connection. As the facility evolves toward full IP, the field-updatable emSFP devices can be reused for other functions, thereby allowing the broadcaster to optimize its equipment investment. Embrionix provides a selection of products that convert SDI to IP, as well as other SFP modules with enhanced capabilities for native IP devices. The platform can run different software programs to define the functionality of

the device, and each software program is available as a separate option via a license program. The newly released emVIRTU all-IP core infrastructure and processing platform provides an extremely dense array of Embrionix software-defined IP processors in just 1RU. The platform makes it easy for broadcasters to address a wide variety of media signal processing within mission-critical HD-up-to-UHD IP production environments.

Building on the company's four years of experience addressing the IP transition, Embrionix has integrated the latest improvements stemming from standardization of SMPTE ST 2022-6, SMPTE ST 2110, and NMOS into its products to ensure they perform to the highest standards and integrate smoothly into complete systems.

Leading the Way Toward Virtualization

Embrionix was ahead of its time in embracing software-defined signal processing, and the company foresees a future in which broadcasters rent micro-services and processing resources as they need them. In this model, which Embrionix emSFP devices already enable, broadcasters need only invest in the edge devices used regularly (e.g., cameras, monitors) and rely on virtualized services over IP networks. Moreover, they can ensure that every investment they make today in IP will not only help to increase revenue and lower costs, but also serve as part of a future-

proof foundation for more efficient and economical virtualized workflows.

Offering software-defined SDI–IP gateway processing in a miniatured SFP form factor, Embrionix empowers broadcasters to directly connect SDI equipment to an IP network and radically reduce the cost, power, equipment, and space requirements associated with IP-based broadcast operations. In delivering uniquely economical and accessible standards-based SDI-to-IP conversion, as well as versatile signal processing in the IP realm, this Embrionix technology is driving, democratizing, and simplifying the industry's shift to IP. Equally or more important during and after the IP transition, the company's innovative approach facilitates easy entry into virtualized operations and their many benefits.

Oracle – business innovation partner for broadcast and media

Olivier Jorda
Global Media & Entertainment Director, Industry Solutions Group at Oracle

Oracle, which employs 137,000 staff worldwide, has recently joined IABM as a Platinum member. We spoke with Olivier Jorda, Global Media & Entertainment Director, Industry Solutions Group at Oracle, about what the company has to offer in the broadcast and media space and how he sees the landscape unfolding over the coming years – particularly with regard to the battle between OTT and Pay-TV.

The Oracle Business Innovation toolbox

Oracle offers SaaS, PaaS, IaaS and DaaS cloud technologies and can be seen as a business cloud toolbox with cross-industries horizontal applications and vertical offerings in major industries. The Oracle SaaS cloud toolbox includes Customer Experience, ERP, Enterprise Performance Management, Human Capital Management, Supply chain management and DaaS. It's a wonderful set of market-leading cloud capabilities that, when taken together with Oracle's expertise in PaaS such as integration, autonomous databases and big data cloud – and our expertise in emerging technologies such as blockchain, IOT, AI, chatbots, digital assistants – gives us a very broad portfolio to draw from when looking at what our media and entertainment customers want to do. Lastly, our IaaS portfolio (or alternatively converged infrastructure) rounds off the most comprehensive offering in the industry.

Applying the Oracle Business Innovation toolbox to media and entertainment

What we do in the Industry Solutions Group is two principal activities.

The first is sales- and partners-enablement, as they are the ones talking to major media players every day about addressing business objectives with technology – the likes of the BBC, Warner Media, Disney etc.; we know about media and what the trends are, and more importantly we know why Oracle is great for media and entertainment companies. We also enable through other expert industry organizations and partners, and this is where our desire to work closely with IABM comes from.

Our second area of focus is solutions portfolio development. That's where for me – someone who's been in media for a long time and a strategist who's looking at the future of our company in media – that's where excitement is happening because of our unmatched Oracle Business Innovation toolbox described above – we tap into the full portfolio to help our customers achieve their transformation and innovation objectives.

Digital Home Service Solution

A great example of this our Digital Home Service (DHS), which was inspired by a collaboration with Sky in the UK around field service; we develop relevant innovative industry solutions based on real business needs taking advantage of our cloud Business Innovation toolbox. DHS leverages our modern CX suite, IOT and our emerging technologies. What we assessed in the market is that the word 'convergence' so beloved 10 years ago is now back with a vengeance – in version 4.0! We saw a great opportunity with a converging solution where Pay-TV operators such as Sky, who consider themselves as connected media companies, and the likes of AT&T on the other hand, meet in the middle and now fight for the same eyeballs and the same wallet share.

Smart Media Production Planning

Currently, we are focusing on finalizing Smart Media Production Planning (SMPP), a new solution for broadcasters and studios. With content output booming, content makers and finance executives both want to minimize the risk of their content investment, be better at planning, manage resources more efficiently, and

improve tracking of the profitability of content franchises as well as monitoring true costs in real time.

This new solution leverages our ERP Cloud expertise augmented with blockchain, and covers the entire journey of a production in a media enterprise when investing in a new piece of content – this could be a new TV series or a movie for example. The objective of the solution is to be able to first understand how and why the media enterprise is going to make an investment decision, so we start with a data driven approach to creating a new content concept, to then create a production budget using profitability simulations to get to a point where once a decision is made to invest in a specific production planning, resources can then be allocated inside or outside the company.

The production business is increasingly characterized by a reliance on external contractors (camera operators, script writers, or carpenters to name a few). To manage these external resources, we create a suppliers and contractors' marketplace on the blockchain where everyone who is part of a production can register their 'e-passport' in the blockchain – we call it the Media Crew Network. This gives the company a marketplace of already-vetted resources they can draw from and bring into a production when required – based on production planned needs or to address inevitable contingency issues. Within the marketplace, you can create smart contracts, a record of payment and royalties, and a single source of immutable information about them, validated by certified third parties – certifications, competences, references, credit ratings or even criminal record etc.

It's all about validating and peer reviewing. So, if another producer has worked with these contractors, what did they think of them? All this is in the blockchain – and then it's about the productivity of the production crew. We have created a personalized app to help the crew with their daily job. And finally, looping back and looking at the results of the costs to produce but also tracking revenues such as distribution, advertising, syndication, merchandizing of the franchise and looking at the results to give you confidence to invest again.

It's like an infinity loop – you plan for your production, go through the process and then reflect on what happened based on audience ratings, impact on revenues and various other KPIs that are important to you. The Media Crew Network sits in the middle of the production, managing the resources and saving time for the next production. This is the excitement for me in this role at Oracle – looking at innovative, transformational solutions to solve real media and entertainment industry issues.

OTT v Pay-TV: the new battleground

The next thing we're looking at is OTT. I went to the streaming summit at NAB Show this April and it was clear that OTT is proliferating; I learned at the summit that there are 66 OTT services in the US today – which is a lot in itself – and next year, it could double or triple – and that's just in the US; they're popping up like flowers in springtime everywhere!

Unlike the development of mobile, where all the value went to the app players, the value for Pay-TV operators, while under threat, is here to stay – with Pay-TV and OTT working in partnership mode. Looking ahead four years, OVUM research tells us that on average 80% of the combined annual Pay-TV & OTT revenues over the 5-year period to 2023 will remain with Pay-TV operators, with Pay-TV's share falling from 84% in 2018 to 73% in 2023.

It's a confusing, fragmented market for everyone – especially for consumers. I don't think Pay-TV will lose the battle of value in the same way that mobile did. Pay-TV has the tools to fight back against OTT. I'm not saying that OTT is not going to win as a delivery mechanism eventually; I am saying that it's easy to think that direct-to-consumer models is the new thing and the old thing – the other guys – are dead. They're not, and they are going to fight hard around the content experience and serving their consumers better.

I think until OTT came along in force, there was a certain element of being untouchable of some of the Pay-TV leaders around the world. The lack of real competition meant that Pay-TV did not invest enough in customer service satisfaction, personalization, newer content or innovative services.

What the emergence of OTT has done, in the same way the Uber did to the taxi business, is to surface all these issues: high pricing, not-so-great interfaces, lack of personalization, lack of responsiveness to customers, lack of quality on-demand content, lack of digital capabilities to allow self-service' or loyal customers not being rewarded. OTT also transformed the production model. When asked why he worked with Netflix on his recent 'Our Planet' series, Sir David Attenborough cited immediate access to a global audience who can view the content for at least six months. This is a very attractive proposition for content producers to exploit and sweat their assets at global scale.

What OTT did was not only take some value away, and show what great consumer experience looks like, but also surface that aggregation – Pay-TV's basic content-centric model – is not good enough. I see many operators deploying consumer-centric strategies to improve their engagement with their consumers whether it is about content catalogue and presentation, customer service or empowering consumers with digital self-service digital tools.

So OTT is growing fast, but the question is, who is going to own that space of making sense out of it on behalf of consumers? How can consumers easily find out what's out there to watch at 9pm on a Saturday? Presently they can spend 30 minutes looking for the right content to watch and that happens all the time. This will just increase as more offerings come on stream. Potentially Pay-TV operators can play this role of making sense of all the content available, and that's why I think the big Pay-TV operators are not going away any time soon. If some will probably lose some value along the journey, there will be an opportunity for the most successful Pay-TV operators to continue to grow by focusing on transforming the digital consumer experience and making sense of the complexity using Oracle technologies.

Making sense of it all

Can the 66 OTT players in the US sustain? Is there enough subscription or advertising revenue to support them all? Not yet. And Disney + and Warner Media have not launched yet. There will be a lot of consolidation between the hundreds of OTT players who are popping up. You could argue it's a bit like a hype, the same way there's hype around any current blockchain startup that makes it more likely to get funding. We're reaching the top of the OTT hype curve right now and there will be consolidation. Just think of the number of apps on your phone, and now imagine one for every OTT service. If there were an app for every piece of content you want to watch, this would be beyond us to know what's out there.

Having an overview and method of sorting through everything that's out there will be the sweet spot for Pay-TV operators, giving them a value proposition to enable them to charge their customers more. Comcast X1, for example, integrates the content catalogues of Amazon, Netflix and others as well as all the TV channels you subscribe to of course, so when you press the button and say 'tennis' or some series you want to watch, they will show you where to find it. Sky did a similar thing with Netflix about a year ago too. This is a new area for everyone – AI-driven search will be the key. This is a huge area of investment.

Staying ahead of the game by disrupting the disruptors

If you're a Pay-TV operator and you do nothing, you will lose the battle; consumers will go somewhere else. So the direction for Pay-TV operators is

1. invest in OTT so they're part of it, so they will disrupt the others and access new markets quickly and
2. a good balance between curated high quality content and AI driven content search – that's what they're good at.

Now back to Digital Home Service solution for Pay-TV operators

Know your customer

At this time of heightened data privacy, consumers still expect you to know them – "I give you my money, I expect you to know me and I'd like you to know what's happening in my home. If there's an issue with the transmission, I want you to know if it's the dish, the cable, the STB or whatever." It's a world where we need to find the right balance between knowing everything and knowing enough to serve our customers better. Today in many cases, TV operators don't know enough. It's about capturing all those data points at different places in the digital home to be able to serve your customers quicker and better; and be pro-active in a thoughtful way. IOT can help with this by delivering immediate digital home data, coupled with predictive analytics, and acting upon it.

Empower your customer

Improving relationships with subscribers includes providing them with the tools to enable them to do things themselves. Instead of sending a field technician, a chatbot can help a customer set up a set-top box, with tests to check and validate. In case of an issue, a live remote agent on your mobile can remotely see you and your STB, but on another screen has access to your home data and show recommended actions to solve your particular problem remotely.

Get ahead of the game

It's also critical to be able to know straight away if there's a potential issue – a storm coming for example – and to send agents to that region from another quiet one to be on hand to react. It's about being more efficient at managing your own resources, knowing then acting on it – informing your customer "something's happened and we're working on it and we have an appointment available in an hour if you can see us". Operators can do this through phone alerts or chatbots – in Oracle DHS, we have messages within the app. As soon as the agent arrives, they will have access to all the information on the digital home – all the data points – as well as recommended fixes so will have the right parts to rectify the problem. Everyone wins.

Taking this one stage further, think about predicting issues. For example, what if a STB product manager could predict when boxes will fail, or do a health scan of all their boxes; is there a batch problem? And if you could understand that a STB is likely to fail in three months' time, swap it now instead of waiting for the box to break down. Everyone wins again.

What's next for your DHS Solutions?

Top of the roadmap is adding smart home services in DHS such as security or thermostat services enabled through the STB. This can add new revenues for TV operators – they're losing revenues, so they need to bolster them from somewhere else. Consumers are spending more and more time at home, especially younger ones; millennials don't go out so much and they have expectations for when they're at home. The home gateway – the STB – would be the best place to target; they very likely trust their local Pay-TV provider more than some mega company on the other side of the planet. And if you have a box with an IoT bridge inside, you don't need to buy a connecting bridge – it's already there. For example, Free in France are pioneering home security cameras for 50 euros via their box. In conclusion, I encourage Pay-TV operators to try new models with consumers' needs first in mind.

IABM DC 2019 Global Market Valuation and Strategy Report reveals continuing structural shift

Broadcast and media technology revenues up 2.5% in 2018

The broadcast and media technology sector achieved 2.5% growth in 2018, according to the recently released 2019 Global Market Valuation and Strategy Report (GMVR), published by IABM DC LLC, a joint venture between IABM and Devoncroft Partners. This headline number builds on the modest 1.2% growth reported in last year's Report.

Aggregate revenues for all media technology products and services in 2018 was $52.9 billion, up 2.5% over the previous year. Despite the year-on-year increase, overall market revenues in 2018 were 1.7 percentage points below their 2014 peak of $53.8 billion.

Examination of these figures reveals that the gap between revenues derived from the sale of hardware and software products and those from 3rd party service providers was 11.7 percentage points, the widest margin observed since the inception of the Report in 2009. This is despite a restructuring of the GMVR segmentation model, where $928.6 million of revenues from certain OTT components were recategorized as products because they are sold as modules.

Revenues from hardware and software products (and associated support and maintenance revenues) accounted for 44.2% of the total industry in 2018, or $23.4 billion, up 1.5% on 2017. However, the compounded annual growth rate (CAGR) of product revenues from 2012-2018 was negative 1%.

Revenues from services accounted for 55.8% of the total industry in 2018, or $29.5 billion, up 3.2% on 2017. The compounded annual growth (CAGR) of services revenue from 2012-2018 was 0.4%.

There are also significant market opportunities revealed by the GMVR. For example, product categories such as Live Contribution over Unmanaged Networks, Workflow Orchestration, IP Networks & Switches, and Cloud-based Compute and Storage continued to enjoy double-digit growth rates in 2018.

Although normal industry cyclicality and exchange rate fluctuations play a role in the newly published figures (all GVMR numbers are reported in US Dollars), a variety of other factors continue to impact the market, including:

- End-users are increasingly implementing a generational change in technology infrastructure by moving to a cloud, multi-cloud or hybrid cloud/on-prem model. This move has implications across every aspect of their businesses – people, skills, technology and business models

- As consumer media consumption patterns evolve, and the number of OTT, streaming and S-VOD services continued to grow rapidly in 2018, broadcasters are demanding technology solutions that are more agile and flexible. These are increasingly software and cloud-based with a focus on workflow automation and intelligence through emerging AI/ML deployments at some broadcast and media organizations

- The continuing search for scale among broadcasters, telcos and media companies to enable them to compete with the digital giants has driven increased

M&A activity and joint initiatives in 2018 (and onwards into 2019), putting more pressure on tech suppliers' pricing and reducing the number of sales opportunities

- The relentless growth in content investment continued during 2018, with traditional and new media companies pouring billions into new programming to attract digital subscribers to their OTT offerings. This has had the trickle-down effect of raising technology spending in some product categories, particularly production and post-production products and services

- The move to digital and HD is still lagging in some regions, particularly Africa, the Middle East and Latin America mainly due to a combination of lack of government will or budget. Government regulation also continues to impact the industry in certain regions with mandates for localized content, issuance or delay of new broadcasting licences, auctions of broadcast spectrum, and next generation broadcast standards

- The trend of media companies developing in-house solutions continues to grow, putting more pressure on tech vendors. These in-house solutions range from content management, to advertising technologies, to OTT services that allow them to bypass traditional distribution outlets, and directly target consumers

"Against the backdrop of continuing industry-wide change, media companies and broadcasters are transforming their business models," said Peter White, IABM CEO. "Integral to this transformation is a complete overhaul of their traditional technology procurement and deployment strategies to focus on operational flexibility, which is built on OPEX-based software and services, as reflected in the 2019 GMVR. The impact of these fundamental changes continues to ripple through the supplier community, with those who have lagged in shifting their focus to industry-specific software looking exposed, while those that have embraced this change are moving forward.

"Business model changes require enterprise-wide business transformation that involves everything from operational practices to company culture. This year's GMVR starkly illustrates that tech suppliers cannot expect media companies simply to replace older technologies with new versions of the same. Instead, they need to collaborate and become an integral component of broadcasters' strategic focus as the power is now fully in the hands of the viewers with an ever-increasing number of media choices," White concluded.

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"The GMVR provides invaluable insights into the shifting structure of the broadcast and media technology market that will be of benefit every company operating in the sector," said Joe Zaller, founder of Devoncroft Partners. "Whether you are benchmarking your performance against other vendors or wider industry trends, preparing for M&A activity or are looking to enter the market, the GMVR is the only authoritative source of hard information that covers every area of the industry."
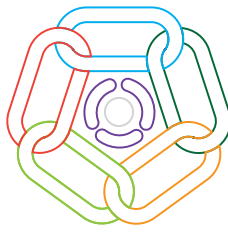
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The 2019 IABM Annual International Business Conference & Awards will take place this year at the Royal Garden Hotel, Kensington, London on Wednesday 4th and Thursday 5th December. Bookings are now open – visit the events section on the website to reserve your place.

Under the banner Change. Innovate. Adapt., this year's conference embraces the new reality of an industry at the tipping point of its transformation to an on-demand, IP-delivered, cloud-enabled future, and will explore how all media business and technology leaders can transform, compete and avoid being left behind.

Delegates will be treated to fresh perspectives and first-hand insights in the inspired content sessions – packed with industry power players and experts. There will also be boundless opportunities to make new connections, as well as collaborating with and learning from peers facing similar challenges.

The focus is on innovation across the BaM Content Chain®: creating new content and business models; connecting broadcast and media businesses with start-ups; entrepreneurs; cutting edge innovation; and the cloud giants who are dominating the tech landscape. The conference sessions are organized under the three themes as follows:

CHANGE
Everyone knows it's not an option just to carry on as you always have – but how do we drive change successfully – and what can we learn from digital technology success stories and start-ups to think and succeed like agile tech titans? This session includes a keynote on driving success, a case study illustrating how to think like a successful start-up, a reality check on what people are

actually buying, and finishes with an entrepreneurs' panel on business transformation.

INNOVATE
Building on the lessons learnt in the CHANGE session, the INNOVATE session looks forward – what's coming next in media and technology trends, and how do we transform our business culture to ride the wave? It opens with a keynote exploring transformative digital products, examines the new content supply chain as the industry moves toward becoming a media factory, illustrates successful design-led thinking and innovation culture with a real-world case study, and concludes with an innovators' panel illuminating how to create new business models and revenues.

ADAPT
The final step in building a business fit for the future is in transitioning to agile operations and as-a-service business models. The ADAPT session gets to the heart of what's needed – a keynote on understanding the relationship between consumers and media, a case study on collaborating to build great media user experiences and a leaders' panel which looks at what's needed to adapt to new business models and market realities.

Prior to the main content sessions, the Wednesday program kicks off at 11am with a **Meet the Buyer**

session. These speed-dating events between IABM members and buyers have become highly popular with both groups, based on quick-fire 10-minute meetings where broadcast and media company leaders share their plans and projects for the year ahead directly with innovative solution providers. "It was a good opportunity to meet some of the smaller vendors and discuss potential opportunities," said Gordon Castle, SVP Technology & Operations, Eurosport, of a recent Meet the Buyer event.

Simultaneously, the **Cloud Integration Challenge** begins. Solving a real-world problem with a working product created in just 24 hours, this new event challenges talented developers from broadcast and media companies and technology and service providers to collaborate and create an innovative solution in the cloud. The team will present the results of its work to the conference audience on Thursday – and the audience gets to vote on how successful it's been.

The 2019 conference also sees the return of the **IABM Dragons' Den**, where the next generation of visionaries, inventors, innovators and start-ups pitch their ideas to convince the judges and audience that they have a product ready to transform the broadcast and media industry.

The **conference keynote speaker** this year is world-leading business coach, Jim Lawless, who will talk about how to enable bold, fast change in organisations. Opening the Thursday programme, Jim will share how to find courage, take courageous necessary risks, and overcome the evolutionary human 'fear algorithm' that causes our whole body to react powerfully against risk and uncertainty, in an exciting, liberating hour.

Perhaps most importantly, the conference will offer multiple opportunities for **collaboration and networking** in an informal, relaxed setting, giving members more chance than ever to make new connections at the only event where broadcast and media companies work collaboratively with technology and service providers to solve the challenges ahead.

During the gala dinner on the evening of 4th December, the winners of IABM's prestigious Annual Awards will be announced, including the Peter Wayne Golden BaM Award®, given to the overall winner judged across the 2019 BaM Awards® at NAB Show and IBC.

"This year's program is our most exciting and challenging yet," said Peter White, IABM CEO. "In such tumultuous times, businesses need all the help they can get. The conference is designed to arm delegates with the ideas and inspiration they need to succeed and win – and also provides unparalleled opportunities to form new partnerships and explore new business opportunities."

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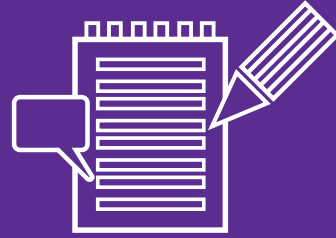
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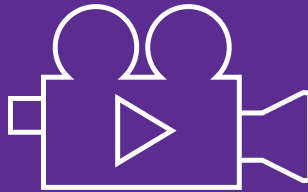
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