



NEWS & VIEWS	6	CREATION	16	MANAGEMENT	18	DISTRIBUTION	20	X-PLATFORM	24
--------------	---	----------	----	------------	----	--------------	----	------------	----

### WORLD IN BRIEF

#### Preserve C-band for satellite services

**TORONTO** – The World Broadcasting Union (WBU) has called on satellite service providers and government regulators to protect the availability of the upper part of C-band spectrum for satellite services, which is currently used to provide multiple broadcast services.

#### Amazon continues football drive

**MADRID** – After successfully acquiring streaming rights to 20 matches of the 2019/20 English Premier League, Amazon is reportedly eyeing to do the same for *La Liga*, Spain's top professional football league.

#### TRAI rolls out new regulations

**NEW DELHI** – India's Telecom Regulatory Authority (TRAI) has introduced a raft of new rules and regulations, which set out how addressable systems must be used. Also covered are 60-day reporting rules where multiple-system operators must state their pricing structures and genre of channels carried.



# Blockchain changing paradigm of content acquisition

BY SHAWN LIEW

**SINGAPORE** – Blockchain will revolutionise how the world's data is stored, declared Ben Flint, chief operating officer of Vuulr, a global marketplace and digital supply chain platform for the TV and film content industry.

He told *APB*: "Data will no longer be owned by any one company's server, but maintained on a decentralised network."

"In the context of the media world, data relating to issues such as rights transactions, metadata, contractual availability and audience ratings will all have one version of the truth that sits on an open ledger — obviating the need

**Ben Flint (right), chief operating officer of Vuulr: "In combination with other technologies, blockchain can add exponential physical efficiencies — in terms of data storage — and emotional support in the form of trust in the data that it stores."**



PHOTO CREDIT: ISTOCK BY GETTY IMAGES

to trust any one company."

According to Vuulr, US\$240 billion is spent annually by broadcasters and over-the-top (OTT) services

on acquiring film, TV, sports and e-sports content. However, around 40% of that value can be lost to the cost and friction of the transaction.

At *ConneCTechAsia 2018* held in Singapore last month, Flint gave a presentation entitled *Creating* ▶▶ 8



**S Iswaran, Singapore's Minister of Communications and Information: "[The advent of disruptive technologies] has created many new possibilities for our people, our business and our economies. The challenge is to navigate this new digital terrain successfully for mutual benefit."**

## Disruptive technologies pose challenges & possibilities

BY SHIRISH NADKARNI

**SINGAPORE** – "The advent of disruptive technologies has revolutionised the global economy, altered industries and business models, and changed the nature of jobs. However, it has also created many new possibilities for our people, our business and our economies."

"The challenge is to navigate this new digital terrain successfully for mutual benefit," said S Iswaran, Singa-

pore's Minister of Communications and Information, at the opening ceremony of *ConneCTechAsia 2018* held in the republic last month.

The minister pointed out that South-east Asia has a growing middle class and a population of 630 million people, more than half of whom were under the age of 30 and actively contributing to the remarkable growth in the region's Internet economy. ▶▶ 8

### WE INTEGRATE WORLD LEADING BROADCAST PRODUCTS

> at hardware level
> at software level
> at cloud level

to build world leading solutions for Asia's leading Media Companies.



# Don't block out IP and blockchain – their potential is enormous

While the world continues to change politically, culturally and technologically, some organisations remain stubbornly resistant to the very notion of change.

Why is that so? For starters, change typically represents a deviation from well-established workflow procedures that have worked well for many years. More importantly, there is the human element — change often includes disruptive upheavals that forcibly remove individuals from their comfort zones.

Where the broadcast and media industry is concerned, the transition to IP represents an eventual departure from one of the industry's most widely-used and reliable technologies — SDI. Traditional broadcast engineers thus need to be re-trained in order for them to acquire the necessary skill sets to operate an IP network.

At the APB IP Master Class held last month in Singapore, one of the key points discussed was that although many broadcasters in Asia are not yet ready to deploy IP in their facilities, they should no longer procrastinate in getting on the learning curve.

Michel Proulx, the keynote presenter of the Master Class, advised: "Even if now is not the time for you to deploy IP for real-time media in your facility, you need to get on the learning curve, and you need to gain experience and knowledge."

Also making an appearance at the APB IP Master Class was Mock Pak Lum, former CTO of Singapore pay-TV operator StarHub, and now a senior adviser at Tembusu Partners, a Singapore-based private equity firm.

In offering blockchain technology as food for thought during the lunch break, Mock said blockchain as a technology has the potential to disrupt long-standing business models — and, more importantly, it would spark large-scale transformation of value and trust in much the same way the Internet did for the ICT business.

Indeed, do not block out blockchain ...

In this issue, you can also read about how companies such as Vuulr and AllRites — both operating in the content distribution sphere — are already leveraging blockchain technology to support and address issues such as rights transactions, metadata, contractual availability, audience ratings and content piracy, among others.

Much like IP, there is much for the broadcast and media industry to learn about blockchain technology, and how it can be applied most effectively to their businesses. What broadcasters and media owners should not do, however, is completely block out the possibilities that these technologies can potentially bring for them.

Perhaps, we should also recall the visionary American who in 1997, armed with the *Think Different* motto, changed irrevocably the way content and media is consumed — the brand is Apple and that man was Steve Jobs.

*Shawn Liew*

**SHAWN LIEW**  
MANAGING EDITOR



## EDITORIAL

managing editor

**Shawn Liew**, shawn@editecintl.com

contributing editor (technology)

**Karl K Rossiter**, karl@editecintl.com

news editor

**Josephine Tan**, josephine@editecintl.com

## CORRESPONDENTS

■ India

**Shirish Nadkarni**, shinads@yahoo.co.uk

■ USA

**Mike Feazel**, mfeazel@gmail.com

## PRODUCTION

production editor

**Zuraini Ridzwan**, zuraini@editecintl.com

junior sub-editor

**Eva Meango**, eva@editecintl.com

senior multimedia designer

**Raymund Jaudian**, raymund@editecintl.com

ad/office administrator

**Irene Lok**, irene@editecintl.com

accounts manager

**Tan Hui Min**, huimin@editecintl.com

## MARKETING

chief marketing officer

**Kylie Chua**, kylie@editecintl.com

director - sales & marketing

**Jessie Tan**, jessie@editecintl.com

manager - marketing

**Lynn Chee**, lynn@editecintl.com

## CIRCULATION & PROMOTIONS

circulation & promotions manager

**Lynn Chee**, lynn@editecintl.com

## PUBLISHING

publisher/editorial director

**Andrew Yeo**, andrew@editecintl.com

## MEDIA REPRESENTATIVES

■ China

**Yang Ou**

BEIJING BUNCH EXHIBITION  
SERVICES LTD

Room 501/B1, Thunis Development Building, No. 11 Huixin East Street,  
Chaoyang District, Beijing 100029

Tel: +86-10-6482 3808-106

Fax: +86-10-6482 3670

E-mail: yangou@bbes.com.cn

■ Japan

**Mikio Tsuchiya**

WORLD MEDIA SERVICES INC

3-35-1-302, Hongodai, Sakae-Ku, Yokohama 247-0008

Tel/Fax: +81-45-891-1852

E-mail: mikio.tsuchiya@worldmedia.jp

■ USA & Canada

**Gary L Rhodes**

SEDOR MEDIA INC

45 Florence Avenue, Leonardo, NJ 07737, USA

Tel: 1-848-757-2930

E-mail: sedorusa@comcast.net

Asia-Pacific Broadcasting is published by:



**Editec International Pte Ltd**

61 Tai Seng Avenue #05-01

Print Media Hub @ Paya Lebar iPark

Singapore 534167

Tel: 65 6282 8456

www.apb-news.com

All rights reserved.

MCI (P) 009/08/2017 PPS 985/06/2013(022995)

Printed by Markono Print Media Pte Ltd

## Stay connected to APB



Find us on Facebook

■ [www.facebook.com/APBnews](http://www.facebook.com/APBnews)



Get Twitter updates

■ [www.twitter.com/APB\\_News](http://www.twitter.com/APB_News)

## APB PANELLISTS



**Dr Peter Siebert**

Executive Director  
The DVB Project



**Stan Moote**

CTO  
IABM



**Andrew Anderson**

Head of Broadcast  
Operations  
Seven Network  
(Operations) Ltd



# ARRI SRH-3

CREATIVITY IN MOTION

Let your camera go where you can't with ARRI's new Stabilized Remote Head SRH-3. External centrifugal force is easily compensated by extra motor power and the flexible, lightweight, and compact design allows for payloads up to 30 kg (66 lbs.). No matter where you are, the SRH-3 offers solutions that were simply not previously possible at such levels of precision.

ARRI STABILIZED REMOTE HEAD. TRULY CINEMATIC.

For more information please contact:

[www.arri.com/css](http://www.arri.com/css)

**ARRI ASIA Limited**

41st Floor, One Kowloon,  
1 Wang Yuen Street, Kowloon Bay,  
Kowloon, Hong Kong

Tel. +852 2571 6288  
Fax. +852 2875 9181  
info@arri.asia



COMING  
WITH OUR  
OCTOBER ISSUE

APB  
News You Can Use

# SYSTEMS INTEGRATION

2018

As viewing consumption habits continue to evolve, this special supplement will highlight why it is more critical than ever for broadcasters and operators to find the right technology partners to build new infrastructures based on converging technologies, including hybrid IP/SDI systems.

To participate in this special supplement, please contact +65 6282 8456 or e-mail [jessie@editecintl.com](mailto:jessie@editecintl.com)



APB ASIA-PACIFIC  
BROADCASTING  
www.apb-news.com

# contents

July 2018 (volume 35 issue 6)



16



20



18



24

PHOTO CREDIT: ISTOCK, GETTY IMAGES

## News & Views

- 6 **VIEW FROM THE TOP: IP as a replacement of SDI – when is it the right time to go IP?**  
Michel Proulx, media industry advisor and a former CTO of Miranda Technologies, discusses the benefits of IP and the best time for individual broadcasters to begin the transition.
- 7 **PROMPTINGS: Creating a mutual force to present ASEAN to the world**  
Jocelyn Little, managing director of Beach House Pictures (BHP), discussed the company's collaborations within ASEAN states to further enhance and raise the level of awareness and opportunities in the ASEAN film industry.
- 9 **EVENTS:** Review of APB IP Master Class; ConneCTechAsia2018; and Calendar of Events

## Creation

- 16 **FEATURE: Newsrooms get more intelligent**  
As broadcasters continue to work in multiple formats and are increasingly controlled by tight budgets, emerging technologies such as AI are expanding the flexibility and functionality of newsrooms automaton systems.

## Management

- 18 **FEATURE: Is cloud the answer to the playout of tomorrow?**  
Due to the entrant of over-the-top (OTT) platforms, media companies today have to also cater to non-linear programming. The move of playout into the cloud is empowering broadcasters to evolve their operations to better meet the demands of today's audiences.

## Distribution

- 20 **FEATURE: STB technology evolves to address changing media consumption behaviours**  
While some observers are predicting an unstoppable migration to a media consumption world without set-top boxes, this may not necessarily be the case.
- 23 **Newtec boosts satellite performance for broadband and broadcast**  
Newtec is offering a range of satellite solutions that help broadcasters and service providers enhance efficiency and performance.

## X-Platform

- 24 **FEATURE: Personalisation and customisation: Empowering audiences with more control**  
Technologies like big data are now enabling operators to present their content to viewers differently — by personalising content to viewers' interests while allowing viewers to customise their own selections and content preferences.
- 26 **Start to make your way into an-IP era**  
Matthew Goldman, president of the Society of Motion Picture and Television Engineers (SMPTE), explains why broadcasters need to start looking at IP, even if they are not ready to make a full transition yet.



# Streamline the broadcast workflow

## Instant access to broadcast devices

Accessing content and information rapidly is crucial in today's broadcast workflow.

IHSE KVM matrix switches provide instant connection to remote devices, giving producers, editors and engineers the data they need, right away, from wherever they are. No matter where the source device or server is located.

Allowing them to work in the most efficient and effective way.

The way they choose.

## Virtual machine connection

The latest addition to the extensive range of KVM extenders brings IP connectivity. Operators can now access virtual and cloud-based machines as easily as local devices.



**IHSE GmbH**  
info@ihse.de  
Tel: +49 (7546) 9248-0

**IHSE ASIA**  
info@ihseapac.com  
Tel: +65 (6841) 4707

**IHSE USA**  
info@ihseusa.com  
Tel: +1 (732) 738 8780

[www.ihse.com](http://www.ihse.com)

**ihse.**  
ASIA

# IP as a replacement of SDI – When is it the right time to go IP?

BY MICHEL PROULX

The question of whether IP is the right solution for my project has become one of the most important questions facing TV production and playout facility engineers lately.

The truth is: the answer is dependent on many factors. It depends on what you are trying to achieve and whether you are building a new facility or expanding an existing one. It also depends on the size of the facility and whether the facility will be HD-only, includes some 4K/Ultra HD (UHD) or aspires to be able to support 4K/UHD at some point in the future.

## The benefits of IP

### ■ Reduction in cabling and connections

Because IP is packet-based, it is possible to combine multiple channels of different types of signals in both directions. This combination generally leads to a dramatic reduction in the amount of cabling required. For example, a single 100GE link can transport 60 or more HD videos and associated audios in each direction. Genlock, control and even file traffic can be carried on the same 100GE link.

### ■ Enable a transition to software and software-defined solutions — improve flexibility and agility

By eliminating the need for specialised I/O connections, IP enables the use of software-based solutions hosted on standard x86-based computing components.

For processing-intensive or latency-sensitive video functions, many vendors have now introduced multi-purpose hardware modules that can be software configured to perform different functions ranging from simple frame syncs to

“The question of whether IP is the right solution for my project has become one of the most important questions facing TV production and playout facility engineers lately.”

full up/down/cross-conversion or high channel count multiviewers. Because they can be reconfigured as needed, these software and software-defined solutions dramatically improve the flexibility and agility of a facility by allowing users to change the functions performed based on the needs of the day.

### ■ Format-agnostic infrastructure

Another important benefit of IP is that it is agnostic to format. IP transparently transports and switches SD, HD and 4K/UHD video signals. Even 8K signals can be handled, although these require 100GE ports for each signal, which reduces capacity of the network. Whether 4K/UHD is a short-term priority or a longer-term aspiration, IP provides an agile and future-proof infrastructure.

### ■ IP enables larger scale

Because it is packet-based and can switch individual channels, even though they may be multiplexed in the same physical interface, IP can enable much larger scale (larger number of video sources and destinations) than SDI. There are now single chassis 2RU IP switches that have as many as 60 100GE ports. This is enough switching capacity to switch 4080 x 4080 HD 1080i25 or 425 x 425 4K/UHD signals. In comparison, the largest 3Gbps SDI routers max out at just over 1100 x 1100 and fill up

two racks of equipment. Video routers that can handle 12Gbps SDI for 4K/UHD are available but currently max out at around 288 x 288.

### ■ Seamless integration of remote production

An important trend in live production is the leveraging of remote or distributed production scenarios in which equipment and personnel are located in different facilities. By deploying IP routing at each facility and linking the facilities via a wide area IP backbone, it becomes possible to create a single seamless network.

In such a network, users no longer need to worry about multiple switching stages or about where a specific piece of equipment or person is. The entire system appears as one larger system, resources are more easily shared and operations are simpler.

### ■ Does IP benefit your project?

As stated in the very first paragraph of this article, the question of when IP will be right does depend a great deal on the type of project that you are planning. The table shown maps the different benefits of IP to different types of projects or situations. Colour coding of the cells provides an indication of whether a specific benefit is of great value (green), neutral (yellow) or if there is no benefit (orange).

As the table shows, IP is not right for all projects but it is right for many of them. Over time, the use of IP will continue to grow; vendor solutions will

mature; and IP will become advantageous for even more use cases.

### ■ Do not wait ... get started now

There is little doubt that IP presents a whole new set of challenges and complexities, while an important knowledge gap exists today.

So, even if *now* is not the time for you to deploy IP for real-time media in your facility, you need to get on the learning curve, and you need to gain experience and knowledge. Attending seminars and reading white papers will get you started, but to be really ready for this technology, you have to get your hands dirty. Towards that end, I highly recommend that you build something in IP today. Whether it is a lab, a small sand box project, or an experimental studio, it does not matter how small the project is — the important thing is that you get started.

Doing so will put you in touch with the vendors developing IP, and allow you to understand the capabilities and limitations of today's solutions. You might even be able to influence their roadmaps or priorities, and your engineering personnel can learn about what is really important to know in this new application.

This way, by the time IP is right for you, you will be ready and your transition will go smoothly. **APB**

*Michel Proulx is a media industry advisor, and a former CTO of Miranda Technologies.*

VIEW  
FROM THE  
TOP

Benefit of using IP instead of SDI	Type of Project				
	Greenfield, new build production and playout facility	New build production OB van	Expansion of existing production facility but still HD	Expansion of existing production facility to add UHD	Replacing playout system
Enable Software and Software Defined	Enables use of more software-based solutions, improves agility of facility	Software-defined components results in fewer models to have to carry spares	Limited: Likely want to use equipment similar to existing facility	Limited: Likely want to use equipment similar to existing facility	Enables use of all software solutions for playout and playout monitoring
Reduction in Cabling	Dramatic, especially if facility is spread across multiple rooms or floors	Can lead to dramatic reduction in weight	Limited benefit in existing facility	Limited benefit in existing facility	Important reduction in cabling
Format-agnostic	Even if not UHD immediately, infrastructure is future-proof	Even if not UHD immediately, infrastructure is future-proof	Not applicable	New studio is totally format-agnostic	Even if not UHD immediately, infrastructure is future-proof
Scale	Yes, particularly if multiple studios	If OB van is large, IP may be of benefit already existing	Not applicable, core infrastructure IP not as beneficial	If new studio is large: IP is better, if not: modest switch size	Enables large channel count with
Conclusion	IP is best-suited here, enables software-based and format-agnostic	IP especially useful if OB van is being built for HD and UHD operation	IP of limited value in this type of project	Consider building an IP island for new UHD production area	IP likely a good option even if remainder of facility is SDI



## APB PANELLISTS



**Louis Boswell**  
CEO  
CASBAA



**Graham Stephens**  
CTO  
Media City  
Development, Malaysia



**Goh Kim Soon**  
Senior Vice-President  
Broadcast Engineering  
Mediacorp



**Shad Hashmi**  
Vice-President,  
Digital Development,  
Global Markets & Operations,  
BBC Worldwide Asia

# Creating a mutual force to present ASEAN to the world

**First, can you share with us the strategies you have developed for Beach House Pictures (BHP) in bringing the Association of South-east Asian Nations (ASEAN) to the world?**

**Jocelyn Little:** Over the past 12 years, BHP has showcased ASEAN to the world across many genres of content. We have approached our strategy from two angles. The first has always been to look for stories that will appeal to international audiences such as Singapore's *Wild City* or cutting-edge science and engineering marvels like Petronas Towers and Marina Bay Sands. We have also showcased the rich cultural and historical travel destinations around the region in shows such as the 10-part series in Indonesia — *Wondersia* — as well as two seasons of the popular *Cesar's Recruit*, which is shot entirely across Asia.

And the second angle is to employ different business models to fund the content — these range from full commissions with platforms such as Discovery, National Geographic and the History Channel to actually building co-productions relationships between regional and international partners. A good example of this was our *Frontier Borneo* series, which we worked on with Kyanite TV from Malaysia last year. This project was co-funded by Singapore's Info-communications Media Development Authority (IMDA), National Film Development Corporation



Comprising 10 member states, the Association of South-east Asian Nations (ASEAN)

may collectively appeal to a wider range of international audience with its culturally rich history and diversity. APB prompts Jocelyn Little, managing director of Beach House Pictures (BHP), to discuss collaborations among ASEAN member states to further enhance and raise the level of awareness and opportunities in the ASEAN film industry.

Malaysia (FINAS), Discovery Asia and UK TV.

**In your opinion, what makes ASEAN attractive and appealing to global audiences? More importantly, how does these elements enhance ASEAN filmmakers' storytelling capabilities, and how is BHP incorporating these elements into its content production?**

**Little:** ASEAN is one of the most culturally diverse regions in the world, but is actually relatively untapped in terms of international exposure — there are still so many intriguing stories to tell. There are also countless locations that could be attractive for international producers as locations for both factual and fiction content, if we can make them competitive in pricing with a high quality of skilled crew and production support infra-

structure. Finally, by working together, we can discuss and launch even more varieties of development and production investment models to help these stories and locations fulfil their potential.

**How is BHP contributing in raising awareness of this region, and what opportunities do you see the ASEAN film industry offering to the wider Asia-Pacific region?**

**Little:** We are heartened to see that the 14th Conference of ASEAN Ministers Responsible for Information (AMRI) has made it a priority to encourage co-production in the



**“ASEAN is one of the most culturally diverse regions in the world, but is actually relatively untapped in terms of international exposure — there are still so many intriguing stories to tell.”**

— Jocelyn Little, Managing Director, Beach House Pictures



*Teddies 2*, commissioned by Mediacorp's Okto and Network Nine from Australia, is co-produced by the kids division of Beach House Pictures and Northern Pictures.



*Who Runs the World* is a series Beach House Pictures is producing for the History Channel. The series is being shot across six ASEAN countries: Singapore, Malaysia, Thailand, Indonesia, the Philippines and Vietnam.

region. Between ASEAN member states, we need to foster more opportunities for producers to work together, gain experience and acquire new skills in production.

As a region, we are lucky to have a diverse set of cultures and backgrounds. Through the framework for co-production in the audio-visual sector for ASEAN, we envisage there will be more sharing of knowledge and expertise between countries, and we can tell compelling stories about ASEAN to the world.

**Lastly, what are some of the projects that Beach House Pictures is currently working on?**

**Little:** BHP is currently working on

a wide range of projects such as *Master Chef Singapore*; *The Art of Craft*, which is a co-production with China's CCTV 9 and supported by Singapore's IMDA; a documentary of Raffles Hotel; and *First Man Out* — a survival series that is being shot around Asia — with Discovery International.

Our kids team is producing *Teddies Season Two*, which is a co-production with Mediacorp's Okto, Northern Pictures and Network Nine from Australia. We are also currently shooting a series, *Who Runs the World*, for History Channel, which is being shot in six ASEAN countries: Singapore, Malaysia, Thailand, Indonesia, Vietnam and the Philippines.



## GRAPHITE | All-in-one Live Production Vehicle.

Imagine an all-inclusive system that combines superb big switcher performance, visually stunning 3D graphics, instant access clip servers and pristine audio clarity – with the hardware needed to ensure resolute performance – **that's Graphite.**

Now, the production power of Graphite can be coupled with OverDrive, the world's most popular Automated Production Control system for increased operational efficiency - **that's OverDrive + Graphite.**

Check us out on Facebook:  
facebook.com/RossVideoAPAC

Sales Enquiry: Sales-APAC@rossvideo.com

www.rossvideo.com/graphite



# Keeping up with change is the way forward

**SINGAPORE** – Stakeholders in the satellite communications industry need to “see change as a challenge to grow, develop and become stronger to benefit the larger ecosystem”, said Louis Boswell, CEO of CASBAA.

Boswell was speaking at the CASBAA Satellite Industry Forum 2018, which was held in Singapore on June 25, and which discussed topics such as innovation, the need for partnerships, better revenue-generation models, the implications of video, connectivity and 5G.

Highlighting the theme of change, John-Paul Hemingway, CEO of SES Network, emphasised that the satellite industry must become part of the mainstream. “The industry cannot be limited to innovating in space; we have to be bolder, we cannot be niche,” he said.

Mitsutoshi Akao, deputy group president, Space and Satellite Business Group, SKY Perfect JSAT, added: “We are starting to think how to expand our space business not just in geostationary orbit (GEO), but also in drones, low earth

orbit (LEO) and medium earth orbit (MEO).”

Change was also apparent in the approach being taken by major industry players in actively seeking partnerships.

Huang Baozhong, vice-president, APT Satellite, highlighted that while the company maintains a “good profit margin”, it is continuously looking for partners in other parts of the world.

As for Eutelsat Asia, its CEO, Jean-François Fenech, said: “Our main business in Asia is around mobility and data, and we are looking to grow our video and direct-to-home (DTH) business in the region.”

5G also featured prominently on the CASBAA agenda, with Terry Bleakley, regional vice-president, Asia, Intelsat, commenting: “5G will require a hybrid network, and the development cycle offers the satellite sector an opportunity to become a core part of the telecoms solution.”

Rounding up the event, Nile Suwansiri, chief commercial officer of Thaicom, cautioned that for satellite to be successful, it is not just about the cost, but about establishing demand for satellite’s role in 5G.

of the past because everyone can see who the rightful owner of the content is, and moreover, many people will have a vested interest in the content — this is the power of blockchain technology.”

Blockchain, Mehta believes, will be as disruptive to the media industry as the Internet, allowing new players to transform every aspect of the industry, from the creation to the consumption and monetisation of content.

And many innovative companies, including AllRites, are already leveraging blockchain, he insists. In the next few months, the AllRites Marketplace will transition to blockchain, where all content will have its own unique media identifier, which is placed on a distributed ledger that is opened to anyone to search free of cost. This will allow buyers and consumers of content to independently verify the authenticity and ownership of the content.

“This is a truly exciting time in our industry and as a content creator myself, I am looking forward to riding the next wave in technology — blockchain,” Mehta concluded.



**UBM Asia’s Motia Gandhi:** “This year, we have brought our three shows under one new brand — ConnecTechAsia, positioned at the intersection of the converging industries of info-communications, broadcasting and emerging technologies.”

## Ability to innovate and mitigate digital disruption a key success factor – Gandhi

1 >>

“Today, ASEAN has 330 million Internet users, with 70 million new users since 2015,” he said, adding that 90% of these users spend almost four hours a day on the Internet through their smartphones.

“These young, tech-savvy and connected citizens are ready to shift ASEAN’s engine of growth to the next gear, and seize the opportunities that technology and the digital economy have to offer them.”

At the opening ceremony, Motia Gandhi, group managing director (ASEAN Business) and vice-president, UBM Asia, the show organiser, also emphasised that the ability to innovate and mitigate digital disruption would be the key success factor in the fast-evolving setting in Asia — and that this was a core premise driving the evolution of trade shows organised by his company.

“This year, we have brought our three shows under one new brand — ConnecTechAsia, a mega technology event comprising BroadcastAsia, CommunicAsia and the new NXT-Asia, positioned at the intersection of the converging industries of info-communications, broadcasting and emerging technologies,” said Gandhi.

“Under this new brand, ConnecTechAsia will be the only business platform in the region to cover the entire spectrum of communications and emerging technologies sectors, and also the broadcast industry.

“The event brings a holistic

view of infrastructure hardware, software, services and industry executives from all over the world, to help businesses and governments in Asia navigate and adapt to this new era of digital convergence.”

Indeed, BroadcastAsia2018 featured technologies that are driving changes for traditional broadcasters. These include 4K/Ultra HD (UHD) content, live production, over-the-top (OTT) platforms, and the latest cinematography and film production equipment, including 4K/UHD and 8K cameras.

With gaming fast experiencing significant growth in the region, UBM also hosted the first-ever live eSports tournament — the Southeast Asian League (SEAL) — during the show.

Held in collaboration with WeOne, a blockchain-based eSports tournament and gaming platform, together with eSports organiser Cresmos, the three-day live-streamed Hearthstone Tournament provided an immersive experience for attendees.

Gandhi maintained that the ability to innovate and remain agile in the face of disruption would be the defining hallmark of success of the intelligent enterprise of the future.

He concluded: “Even as converging digital trends and the emergence of new technologies continue to re-define our world, ConnecTechAsia will stay true to its vision and gather the latest innovations and knowledge that can enable businesses and governments to build a smarter, more connected world for all.”



**CASBAA’s Louis Boswell:** Stakeholders in the satellite communications industry need to “see change as a challenge to grow, develop and become stronger to benefit the larger ecosystem”.



**Eutelsat Asia’s, Jean-François Fenech:** “Our main business in Asia is around mobility and data, and we are looking to grow our video and direct-to-home (DTH) business in the region.”



**Intelsat’s Terry Bleakley:** “5G will require a hybrid network, and the development cycle offers the satellite sector an opportunity to become a core part of the telecoms solution.”

## Blockchain is as disruptive as the Internet

1 >>

*The New Broadcast Content Economy on the Blockchain*, which explored how blockchain can be leveraged to change the paradigm of the content acquisition industry.

Flint, however, maintains that blockchain, by itself, does not hold all the answers. “But, in combination with other technologies, blockchain can add exponential physical efficiencies — in terms of data storage — and emotional support in the form of trust in the data that it stores.”

Urging broadcasters and media owners to embrace blockchain now, he adds: “The threats, when it comes to media rights trading, are

non-existent. Usually, blockchain disrupts the people who own the data, but because digital rights trading is so new, there is no one to disrupt!

“The only entities that blockchain will debilitate are those that do not use it.”

Riaz Mehta, founder and CEO of AllRites, a global B2B marketplace for Asian film, TV and sports broadcast content, in describing the proficiency of blockchain, is asking broadcasters to imagine a world where every piece of content is uniquely identified, and where its ownership and authenticity can be independently verified.

“In this new world order, content piracy could become a thing

**“In this new world order, content piracy could become a thing of the past because everyone can see who the rightful owner of the content is, and moreover, many people will have a vested interest in the content — this is the power of blockchain technology.”**



— Riaz Mehta, Founder and CEO, AllRites



# APB IP Master Class provides deeper insights into IP transition

BY JOSEPHINE TAN

**SINGAPORE** – Converting to IP is not just about replacing SDI; instead, there is a “bigger transition” at play, emphasised Michel Proulx, media industry advisor and former CTO of Miranda Technologies.

Speaking as the keynote presenter at the APB IP Master Class held last month in Singapore, Proulx referred the “bigger transition” to the move from hardware-based, fixed-function solutions towards software-based solutions. He explained: “The software-defined world needs IP because the real deal of flexibility comes from software, which will allow fixed tools to be more agile. Moreover, the benefits of moving to software is greater, as it will eventually lead to virtualisation and the cloud.”

Instead of having purpose-built hardware, he urged broadcasters to invest in hardware that will be compatible with generic computing platforms while recommending operators to install software-based solutions within these systems wherever possible. But in order for broadcasters to successfully transit to software-based solutions, Proulx continued, they will have to start replacing their SDI infrastructure with IP.

Entitled *Real-time Media over IP inside a TV facility*, the APB IP Master Class was organised in collaboration with systems integrator Ideal Systems, and was aimed at equipping engineers and technicians with new thought processes, and the relevant skills in making a successful transition to an IP infrastructure.

Proulx, who conducted a half-day workshop as part of the event,



continued: “What broadcasters get when moving into software-based solutions is a more universal and flexible tool. For instance, if resources were more flexible, it can be scaled up and down as needed. Furthermore, resources can be dynamically re-configured to perform different functions when required.”

Apart from increased flexibility, he identified three other key drivers in replacing SDI with IP: the ability to build a format-agnostic facility, reduce cable infrastructure, and leverage IT innovation and scale.

Proulx also provided a deeper insight into the SMPTE ST 2110 Professional Media Over Managed IP Networks suite of standards, which specifies the carriage, synchronisation and description of separate elementary essence streams over IP for real-time production, playout and other media applications.

To date, under the SMPTE ST 2110 specification, the SMPTE ST 2110-10/-20/-30, 2110-21 and 2110-40 standards — which are designed for uncompressed video and audio streams, traffic shaping and delivery timing of uncompressed video and ancillary data, respectively — have been published.

SMPTE ST 2110-40, which is published in May this year, specifically maps ancillary data packets into Real-Time Transport Protocol (RTP) packets that are transported via User Data Protocol/Internet

Protocol (UDP/IP), enabling those packets to be moved synchronously with associated video and audio essence streams.

Proulx did a comparison between SMPTE ST 2022-6 and 2110, and commented: “SMPTE ST 2022-6 is literally carrying SDI signals over IP as all signals are transmitted over one multi-cast RTP stream. On the other hand, SMPTE ST 2110 is able to transmit multicast streams for video, audio and metadata individually. Therefore, while SMPTE ST 2022-6 may be viable for playout, SMPTE ST 2110 will be an ideal standard for production and other applications where audio and video feeds need to be treated separately.”

Despite the advancements IP might bring forth, IP is not less expensive today, and is more complex due to the maturity of the technology, he highlighted. “The content landscape is becoming more complex, and broadcasters have to now produce more content on a lot more platforms. Hence, the IP exercise is to empower broadcasters to do more functions with less equipment.”

Another factor hindering the transition to IP, according to Proulx, is missing knowledge and skill sets among broadcast engineers, and he urged broadcasters to equip their engineers with IT knowledge in order to stay ahead in this transition.

“In the long term, IP is the way forward, as the benefits are



In his keynote speech, Michel Proulx said: “The benefit of moving to software is greater, as it will eventually lead to virtualisation and the cloud. But in order for broadcasters to successfully transit to software-based solutions, they will have to start replacing their SDI infrastructure with IP.”

important and as software-based devices become more common,” Proulx said. “However, if broadcasters could afford to wait, I would recommend them to wait eight to 12 months as the technology and solutions are not fully matured today.”

Having said that, his next piece of advice is that, while waiting to do the “big project”, start with some small experimental ones. “It is time to start training and learning these new technologies, because the only way to get that skill set is to start doing it,” he concluded.

The session then adjourned for lunch, which was sponsored by AJA Video Systems, and returned with a series of case study presentations by Arista Networks, Media Prima, Dejero, Embrionix and Dell EMC, where the companies highlighted some real-world examples of IP deployment.

Representing Arista Networks was Paul Druce, lead systems engineer, Australia and New Zealand, who shared a case study of its customer, NEP Australia, the outside broadcast (OB) and broadcast facilities provider.

He said: “The idea for NEP Australia to start an all-IP infrastructure

approach was to be able to centralise manpower, thus saving the movement of people around the country. Going IP gives NEP Australia the ability to unify as much staff — and their functions — as possible.”

With the need to centralised production facilities, NEP Australia assigned Arista Networks to design a core infrastructure model at NEP’s Andrews Hubs, which connects 29 sports venues to a “fully redundant, IP-based network”.

Although the SMPTE ST 2110 standard has not been ratified yet at the point of system design, NEP Australia wanted the installation to be future-proofed as much as possible, and built the infrastructure with the capability to be upgraded to SMPTE ST 2110, Druce added.

Having to support the delivery of live sports for Fox Sports Australia, NEP Australia chose to employ Arista Networks’ 7500R platform. Designed for large virtualised and cloud networks, the Arista 7500R series modular switches combine 100GbE density with Internet scale table sizes, alongside the advanced EOS (extensible operating system) software that features network

▶▶ 10



For the NEP Australia project, Arista Networks designed a core infrastructure model at NEP’s Andrews Hubs, which connects 29 sports venues to a “fully redundant, IP-based network”, explained Paul Druce, lead systems engineer, Australia and New Zealand, Arista Networks.

## Creating photo-realistic AR content

As augmented reality (AR) is becoming a trending topic and is increasingly used in many different shows, the process of how we create and develop such applications becomes more important. There are two different aspects to take into account; one is the content that makes sense to be displayed as AR, the other is the quality and integration of such content in a given broadcast show.

AR allows for displaying data-driven graphics along with real images, where real footage or live videos are mixed with virtual backgrounds or scenes, chroma-keyed talents, and additional broadcast graphics or data-driven 3D graphics. During election nights, news, sports or entertainment programmes, data graphics can interact with the talents creating an attractive environment for the audience. This “mixed reality” allows for creating virtual environments, where visually engaging representations of the data can be better explained by the presenters, making complex data easier to understand while enhancing the storytelling.

When facing such projects, the perfect integration between the real and virtual objects with the backgrounds becomes essential. This is because what really makes the difference for the audience is to be unable to tell whether the images they are watching are real videos or digital renders. However, for virtual set production and live broadcast operation, photo-realism is a tough challenge because of the constraints of real-time rendering and operation. So, what if we were able to create, in real time, photo-realistic scenes combining green screen shots of talents and AR graphics, and mix them all together so seamlessly that the audience could not tell which are real and which are not?

Achieving such realism requires the combination of technology, innovation and talent. Thanks to its Combined Render Engine, InfinitySet can combine the Epic Games’ Unreal Engine with Brainstorm’s own eStudio render engine, resulting in a perfect solution to create state-of-the-art hyper realistic scenes, which can also integrate other elements that are essential for broadcast operation, such as 3D data-driven motion graphics,



Miguel Churruga,  
Director,  
Marketing  
and  
Communications,  
Brainstorm

tickers, stats and many others, providing results which are indistinguishable to real footage, no matter if we are working in HD, 4K/Ultra HD (UHD) or even higher resolutions.

InfinitySet can also control the intensity and colour of the real lights and the chroma keyer settings as the conditions require. For example, if the talent is walking around the green screen and the light conditions change in the virtual set, InfinitySet can tell the real lights on the green studio to change accordingly, and also remotely alter the chroma key settings to maintain the best quality, even when using external hardware. So InfinitySet can simulate different conditions of the day, different lights and different ambiences in real time.

Another key feature is InfinitySet’s ability to cast virtual shadows over the real chroma-keyed shadows. These virtual shadows depend on the virtual scene illumination and can affect the virtual elements. On top of that, InfinitySet is also capable of creating accurate selective de-focus and bokeh, matching the depth of field of the lenses on a given scene.

With all the above, InfinitySet’s advanced virtual technology represents a real cost-saving solution, providing new possibilities for production houses and broadcasters for creating realistic scenes and environments, no matter if we are talking about sitcoms, news, sports or entertainment shows. Also, this approach avoids one of the common complaints broadcasters have when using virtual technology — that is, the quality of the virtual sets; so it makes this technology a real alternative to remote live outdoor shooting or physical set construction.

For more information, visit [www.brainstorm3d.com](http://www.brainstorm3d.com) □

## Case studies provide some real-world examples of IP deployment provided

9 ▶▶

monitoring, precision timing, VXLAN (virtual extensible LAN) network virtualisation and EVPN (Ethernet VPN).

To enable automated provisioning workflow, NEP Australia deployed Arista Networks’ EOS CloudVision, a turnkey solution for workload orchestration, workflow automation, and real-time visibility into network operations. CloudVision’s foundation is based on the EOS NetDB, which are infrastructure services for streaming, sharing and aggregating the working state of physical switches running EOS. It is designed to simplify the integration of orchestration systems, overlay controllers, and other network services by abstracting the underlying physical network.

Another user of Arista Networks’ CloudVision networking solution is Media Prima, an integrated media company based in Malaysia. Mohamad Rezwan Khalil Azmi, general manager, IT infrastructure and digital media platform, Media Prima, presented how Arista Networks’ solutions were integrated into its broadcast infrastructure.

He said: “We want to prepare ourselves for the next-generation of broadcast environment by upgrading to high efficiency, low latency and highly scalable architecture that delivers innovative network services. And with the equipment we have from different vendors, we wanted to streamline into one innovative network service so that the different sub-systems are in sync in one single network.

“The project scope also includes upgrading our backbone for post production from 20Gbps to 160Gbps while empowering us to achieve the highest switching efficiency between every interconnected system within the broadcast network.”

The result, according to Rezwan, is the increase in efficiency and productivity, as well as network availability. He elaborated: “The most valuable advantage Arista Networks’ CloudVision has provided us is the visibility of quality of service and network performance. This has enabled us to reduce

operational issues with less downtime and faster throughput.”

Rezwan’s session was then followed by a presentation from Bogdan Frusina, founder of Dejero. In his presentation, entitled *Reliable Connectivity Anywhere — The Importance of Remote Connectivity and the Workflows It Enables*, he explained the company’s concept of blended connectivity. “The concept of blended connectivity is about taking the multiple connections that are available wherever the user can get, aggregate them together to get one virtual connection that allows the user to manage that link across the broadcast facility.”

With an aim in addressing the dilemma that broadcasters face about which video transport assets to deploy for live coverage, Dejero has introduced CellSat, a solution that combines cellular and satellite connectivity. Using Dejero’s network blending technology to combine cellular connectivity from multiple mobile network carriers with Ku-band IP connectivity provided by Intelsat, the CellSat solution provides users the required bandwidth to go live from any location.

Last month, the CellSat solution was deployed for the live video coverage of the Royal Wedding of Prince Harry and Meghan Markle to over three million TV and online viewers.

“When planning for major events such as the Royal Wedding, securing reliable connectivity for their video-over-IP workflow is top of the mind for a broadcaster’s technical producer when surveying potential locations,” Frusina explained. “Broadcasters must have an extremely high degree of confidence that their live feeds will be transmitted without fail. The Dejero CellSat blended connectivity solution provided broadcasters with the confidence they needed to go live in Windsor, where large crowds were likely to cause cellular network congestion, and fibre was not readily available.”

The next presentation, *Transition to IP with an IT Perspective*, was by Denis Pare,

▶▶ 11



Bogdan Frusina, founder of Dejero, explained the company’s concept of blended connectivity, and the development of the CellSat solution, which combines cellular with satellite connectivity.

# Seek right technology partners to accelerate IP transition

Following a series of keynote speeches and case study presentations, the IP Master Class also staged a panel discussion entitled *IP integration in Asia-Pacific, and what broadcasters need to do to build IP infrastructure*. Moderated by APB's managing editor Shawn Liew, the panel discussion explored the key reasons why broadcasters in this region are holding back their IP transition.

For Ideal Systems, the systems integrator also has a live sports production division, which provides equipment rental and full turnkey live production services. Fintan Mc Kiernan, CEO of Ideal Systems South-east Asia, said: "We don't talk about IP as the future because it is already happening now with deployments in the field. At Ideal, we are using software-based production switchers for national football games.

"For instance, we've done five different sports events over the past weekend, and all of them were done on IP with software-based video switchers running on commercial off-the-shelf (COTS) hardware.

"Certainly broadcast manufacturers are bringing out new IP products, but what we found was that some manufacturers claim more than what IP does. Although we are heavily involved in IP, I don't think anybody

is building big IP facilities. And clearly in Asia, South-east Asia especially, every broadcaster's facility is still SDI-based."

Stressing the move to IP is beyond the ability to deliver services broadcasters want today was Richard Bayliss, director of systems engineering, Asia-Pacific and Japan, Arista Networks, who highlighted two drivers for broadcasters to embark on the IP transition — the need to prepare broadcasters for the next move from HD to 4K/Ultra HD (UHD) and even 8K, and empowering them with the flexibility they can have in their infrastructure.

He also cited some challenges the Arista team encountered when working on the NEP Australia project, and elaborated: "There's still some uncertainty and risks from a technical perspective as the NEP project started two years ago, before the SMPTE ST 2110 standard was ratified.

"The project involves reaching out to the entire community.

"One of the things we learnt is that you have to take the first step in experimenting and testing these new technologies, and start learning from real-world experiences."

Mardhiah Nasir, project director at Integriti Padu, the systems integrator behind the

## 'In an IP infrastructure, broadcasters have to manage different signals while managing processing and conversion'

11 >>

vice-president of sales, Embrionix. He said: "In an IP infrastructure, broadcasters have to manage many different signals, from SDI and IP to compressed, while managing processing and conversion. To address these issues and simplifying workflows, Embrionix is bringing its emSFP (small form-factor plug-gable), which can be directly plugged into an IP network."

Embrionix's SDI to IP emSFP-Gateway family provides multiple interfaces to bridge SDI signals into IP. The modules are based on an SFP+ that can either be installed inside a 10GbE IP switch, or inside a third-party equipment with SFP cages. Furthermore, the emSFP-Gateway can be installed directly inside IP commercial off-the-shelf (COTS) switches, thus allowing the COTS equipment to integrate sources with SDI or IP formats.

Describing the emSFP as a processing device that provides more than gateway functionalities, Pare highlighted that the device could also be used for monitoring 4K/Ultra HD (UHD). He explained: "There is no monitor in the market right now where users can have IP directly transmitted into the monitor. Moreover, monitoring 4K/UHD requires a lot of bandwidth for multiviewers. Using an emSFP enables broadcasters



Master Class  
AN APB SPECIAL EVENT

to reduce the bandwidth directly at source."

Additionally, other processes that can be managed via the SFP includes the conversion from standard dynamic range (SDR) to high dynamic range (HDR), as well as the conversion

between SMPTE ST 2022-6 and SMPTE ST 2110, Pare added.

Digital transformation is happening everywhere and disrupting every industry, including the media industry, Charles Sevier, CTO of Dell EMC, declared.

He cited the example of new entrants from technology firms like Apple, Facebook and Netflix, which are taking entertainment off viewers that the broadcast and media industry used to completely dominate, and said: "The reason driving these changes is digital transformation. However, what we do know is that digital is the future, and it's the way we all have to go.

"And in this media industry, digital is changing everything. It's now all about the user experience, and having to deliver that experience anywhere, at anytime, to any devices. While broadcasters continue to deliver their content and services, which they have been doing for decades, they have to enable new engagement methods with today's viewers."

>> 12



Moderated by APB's managing editor Shawn Liew (extreme left), the panel discussion was joined by Fintan Mc Kiernan, CEO of Ideal Systems South-east Asia; Richard Bayliss, director of systems engineering, Asia-Pacific and Japan, Arista Networks; and Mardhiah Nasir, project director at Integriti Padu.

Media Prima project, revealed that Media Prima's initial focus was to centralise storage, but realised that they needed to improve their network infrastructure in order to support this centralised storage model.

As an IT vendor embarking on this project with Media Prima, the Integriti Padu team first studied the fundamentals of the broadcast ecosystem, and combined them with its IT expertise. She described the pace of transition as taking "baby steps", as the

team first started from two workflows. To date, Media Prima is able to manage 16 workflows in the IP environment.

She concluded: "In Asia-Pacific, there is still a lot more room to improve as many media operators have yet to begin their IP transition. But for Media Prima, now that they have improved their network performance, they are looking into virtualising their servers and improving the performance of their applications."

## Got 4K?



## SKYLARK 3300 Integrated Media Server

- IP and SDI
- Record and play HEVC, XAVC, ProRes 4444 and DNxHR
- Advanced channel branding, 8 layers and PiP
- Ad-insertion SCTE-35/104
- Nielsen Watermarking
- Loudness Control
- Closed and Open Captions
- A/V Router control



1 UHD input and 1 UHD output starting at US\$38,888



# Arista Networks fills skill sets and expertise gaps in IP transition

One of the key challenges facing broadcasters looking to move to IP infrastructures is the requirement of a different skill sets among traditional broadcast engineers, said Richard Bayliss, director of systems engineering, Asia-Pacific and Japan, Arista Networks.

Speaking to *APB* at the IP Master Class organised by *APB* and Ideal Systems last month in Singapore, he pointed out: "This can create constraints on how quickly broadcasters can move to an IP network — there are the skills that they need, there's the experience of working with the technology, and when we are talking about live TV, we do need to ensure that the end-user experience is the primary focus."

To help fill these gaps, Arista Networks has been, in Bayliss' words, "working very hard" through industry forums and public showcases to demonstrate the compa-

ny's readiness to help broadcasters transition to IP. "If you think about the skill shortages, particularly when it comes to broadcast engineers having the experience in IP networking, this is an area where Arista has been working hand-in-hand with broadcasters to fill these gaps and to use our IP expertise to bring greater benefits and faster results to the projects that we work on," he continued.

"We have a lot of experience through conducting a number of trials and public testings; we can take these experiences, and we can share best practices with our customers so that while they may not yet have all the skill sets required within their own organisations, we can certainly partner with them to help them get to the outcome they want."

One prominent partner of Arista Network in Asia-Pacific is NEP Australia, which in 2017 chose

the former to provide core network infrastructure to its new production hubs. And while Bayliss acknowledged that it will take time for broadcasters to learn about IP, he identified the NEP Australia project as a leading example of why being a first-mover can pay handsome dividends.

"If you look at the timeline, it was a very aggressive project," Bayliss described. "In fact, it was started before many of the standards in SMPTE ST 2110 were ratified. All it required was for NEP Australia to work with Arista and a range of technology providers to make sure that the technology and the architecture was going to be standard-compliant, and was still going to be delivered based on the SMPTE standards."

By pushing forward and not waiting, NEP Australia has been able to deliver an innovative solution that has given them a whole

**"Arista has been working hand-in-hand with broadcasters to fill these [skill sets] gaps and to use our IP expertise to bring greater benefits and faster results."**

— Richard Bayliss, Director of Systems Engineering, Asia-Pacific and Japan, Arista Networks



new set of skills and core structure for their business, according to Bayliss.

This includes the ability to produce multiple live sports productions from a single Andrews Hubs facility, without having to send a team of producers to different locations. "This gives NEP Australia the ability to increase the amount of content they are producing, and to reduce the cost of creating that content. It also allows them to scale

up their teams and make them more competent as they go through their work," Bayliss added.

And as a final takeaway for broadcasters thinking about IP networking, he concluded: "They should really seek to understand the examples of broadcasters who have already made that transition, and understand how they may be able to apply that to their own infrastructure."

## IP Master Class: 'Create a roadmap while finding the right technology partner'

11 ►►

Sevior also shared a *2018 Big Broadcast Survey Global Trends Index* report published by Devcon, a market intelligence provider in the media technology sector, and revealed the highest rated topic among media companies is multi-platform content delivery. This is followed by IP networking and content delivery, which is ranked second.

"Particularly, cloud computing and virtualisation is ranked fifth

in this survey," he said. "Moving forward, media companies need to focus and deploy a certain degree of cloud technology, regardless if it's on-premise cloud or a rented cloud service from a public cloud provider."

He envisioned the future of media and broadcast infrastructures will resemble data centres, and will be fitted with three main elements — general purpose servers to optimise compute, network and storage functions; flexible IP network with scalable leaf-spine

redundant design; and cloud-scale deployment that will address specific requirements configured in software.

"As an IT infrastructure provider, Dell EMC is focused on enabling cloud and multi-cloud operations for industries. Digital transformation has changed the face of media. It is crucial for media operators to capture and leverage the value of their data capital through embracing IT technologies within their infrastructures," Sevior

concluded.

The *APB* IP Master Class saw attendance from industry professionals and broadcasters from Australia, Brunei, Hong Kong, Macau, Malaysia, Myanmar, Sri Lanka and Singapore.

One participant at the event was Dr Peter Siebert, executive director of the DVB Project, who commented: "Michel made a good introduction into the subject, which enabled me to learn about the underlying challenges in the

industry, which is where the broadcast and IT worlds come together.

"On one side, we have the broadcast world with specific technologies and specific technical terms; on the other hand, we have the IT world that comes from a different side yet also has its own expertise, terminology, and its own way on how things can be done.

"It's challenging to bring these two worlds together in one studio, and I think Michel gave a very good overview on how this challenge can be done."

Describing the IP Master Class as an "eye-opener", Media Prima's Rezwani explained that the in-depth level and quality of the topics discussed were very relevant to broadcasters.

He said: "Seeing the materials prepared by Michel is very valuable to broadcasters like me. It gives us a deeper understanding of the challenges we might face when embarking on this IP transition, how to avoid the same mistakes, and to have an overview of other challenges that could be confronting us later on in this journey.

"The promises of video-over-IP is very compelling, especially when it comes to the ability to do more with less. That said, I'd suggest fellow broadcasters to take a high overview of what they want to achieve — not just in the next five years but on a longer term — and create a roadmap while finding the right technology partner who will eventually get them there."



Organised by *APB* and Ideal Systems, the IP Master Class on Real-time Media over IP inside a TV Facility is supported by Arista Networks, Dejero, Embrionix, Dell EMC and AJA Video Systems.

# vStudio makes BroadcastAsia2018 debut

Setting up a virtual news studio need not be complicated, as visitors to the APB booth at BroadcastAsia2018 found out.

The APB vStudio, set up by APB and systems integrator Ideal Systems, and hosted by APB news editor Josephine Tan, featured live conversations with some of the most prominent personalities in the broadcast industry. The guests shared their thoughts about the transformation they see taking place in today's broadcast and media industry, some of which you can read over the next few pages.

Going behind the scenes, vStudio is also a perfect example of how easy it is to set up a working virtual studio quickly and cost-effectively, said Ideal Systems, which provided the virtual set system for the vStudio.

Aniket Rangnekar, head of live production for Ideal Systems Singapore, explained that the Darim Vision i-studio IS3500 trackless virtual set system is a complete one-box solution that can take in



three SDI + 1HDMI inputs and have one SDI output, while streaming the video to streaming platforms such as YouTube or Facebook.

"As this is a one-box solution, the set-up and operational requirements are minimal," he said. "With the optional Chromudio green screen with stand, a fully working studio can be set up within 45 minutes."

Rangnekar added that the system interface is very simple and intuitive, and is meant for inexperienced staff to operate in a very short time. "The whole concept is to have it self-operated like someone doing a Powerpoint presentation, thus reducing manpower costs."

The vStudio set-up is also ideal for e-learning, presentations, houses



The APB vStudio set-up is also ideal for e-learning, presentations, houses of worship, education sector, hospitality — anyone who wants to create multiple videos but with new ideas and locations but in a cost-effective manner.

es of worship, the education and hospitality sectors — or anyone who wants to create multiple videos with new ideas and locations, but in a cost-effective manner, Rangnekar suggested.

"The customer just needs to be open to new ideas on how they can imagine and position what they want to convey in their video," he explains. "There are virtual set templates already pre-loaded in the

system that users can customise, then script the message accordingly to what they would like to convey."

Users can also build their own virtual environment and load it into the system. There are also designed templates available for purchase online. With adequate lighting and a cost-effective budget, a small set-up can easily be done within a 30-40sqm space, Rangnekar revealed.

As far as future-proofing virtual sets systems, the advent of so much media currently being streamed online, along with the option of being able to tweak virtual reality (VR) sets regularly is already future-proof enough.

"This is already future-proof as you can have a fresh look of your content anytime, even when you are in the same physical space.

"Darim Vision does keep on updating its software and provide additional features to the software, so this is definitely a very good and future-proof investment," he concluded.



"I think the media industry is switching to IP, not only just the studios but also in the field. We feel this trend will continue, and I believe that there's a lot more contribution that is going to happen.

There's also a trend of providing more creative encoding such as HEVC/H.265, and other things like satellite over IP and 5G, which are all driving the trend of having more available connectivity to be able to create more content from different locations."



— Bogdan Frusina, Founder of Dejero

"Many media companies come together here at BroadcastAsia to talk about what technology solutions they need to address the growing requirements of their consumers, while looking to overcome the challenge posed by many new entrants that take away their audience share. People are watching less traditional TV and spending more time with OTT or even simple platforms such as Facebook or Whatsapp, so there is now a shift.

Traditional media companies want to stay competitive, but the most important thing is to have a technology refresh — making sure they have the latest technology to reduce costs and simplify the operation of the day-to-day television production.

Our role is to help these broadcasters transition from traditional linear broadcast into digital operations. Digital means a lot of different things to different people, but what it means is getting out of that mindset of just producing content for one use. Instead, everything will be re-used and sliced up in different ways."

— Charles Sevier, CTO (APJ), Dell EMC



allows users to do it simply and in real-time."

— Robert Stacy, General Manager, Asia-Pacific, AJA Video Systems

"AJA has been a leader in the high dynamic range (HDR) colour space. We've developed a family of products including our FS-HDR, which is a real-time conversion solution. This is exciting because broadcasters are looking for new and compelling ways to create more exciting content, especially when it comes to sports, and this box

"We're seeing that there's a lot of conversion right now — media companies are looking at converting their SDI facilities into IP, which definitely is not going to happen overnight. This is going to be a long process, I'd say roughly over five to 10 years. Some countries are going to be faster than others. We see that in Europe where major broadcasters are engaged in this IP transition as well as in North America.

We're just starting to see the transition happening also in the Asia-Pacific market, which is why Embrionix is here at BroadcastAsia2018."

— Denis Pare, Vice-President of Sales, Embrionix





“In today’s changing media landscape, everyone is looking for new solutions that can help make production more efficient. From a technological perspective, you have trends such as IP, automation, artificial intelligence (AI) and virtual reality (VR).”

As one of the biggest European systems integrators (SIs) that operates worldwide, we have done many projects — including outside broadcast (OB) and fixed facilities — and we have our own cutting-edge products. We are now looking to bring our expertise and experience to Asia.”

— **Antti Laurila, Sales Director, Broadcast Solutions, with Millette Manalo-Burgos of APB@ConnectTechAsia Show News**

“It is very difficult to isolate only one technology; there are so many technologies being talked about in Asia. But certainly, 4K and HDR are having a huge impact on the television and transmission industries, as well for the simple reason that we are obviously dealing with far higher bandwidth — and we’ve got to have underlying technologies like Remote PHY to be able to deal with this.”

We are also starting to see a lot of interest and practical applications for virtual reality (VR) and augmented reality (AR), so you need to have bandwidth latency management — the viability of the transmission technology that we have right now. Obviously, there is also a lot of discussion about 5G. Asia really has the opportunity to lead the way in 5G deployment — I think it is going to be fascinating to see, and from our point of view, participate in that whole [5G] evolution.”

— **Duncan Porter, Senior Vice-President, Global Marketing, ARRIS**



“Absolutely, the trend we see taking place in today’s media industry is the move towards IP networking. Most recently, one of the areas that is very exciting is the contribution phase — the network that connects the broadcasts to live events. Using some of the evolving standards such as SMPTE ST 2110, I was seeing a great attraction to using an all-IP network for end-to-end broadcast.”

If you look at what that means for broadcasters, it means that they’re able to move faster and deliver more personalisation of channels. But they are also able to create a remote production environment, centralising the stuff, and they get more efficient to create more content using their existing infrastructure.”

— **Richard Bayliss, Director of Systems Engineering, APJ, Arista Networks**

“The trends that we are focusing on is around IP newsgathering. We see a worldwide decline of the typical satellite truck, which needed to be operated by engineers and is fairly large and expensive, moving towards adopting solutions from the cellular bonding world.”

Personally, I see a lot of uptake on cellular bonding kits due to its ease of use. Unfortunately, not always cellular networks are available and reliable, and that is still where the satellite industry is capable of supporting.”

— **Hans Massart, Broadcast Market Director, Newtec**



“Content is exploding everywhere, and viewers have more control than ever before over what they want to watch, and when they watch it. Content is still king today, and is produced as if in a super high-efficiency factory. The glass-to-glass supply chain is growing smaller, and all of that is leading to a lot of change and turmoil on the technology side. We, as technology vendors, have to keep with the demands of our customers and their viewers.”

— **Cameron O’Neill, Director, Asia-Pacific, Riedel Communications**



“Basically, what I saw the most in the show is that all the standards we have developed for UHD and HDR (high dynamic range), for higher frame rate, and next-generation audio are now getting implemented. So now we are seeing equipment and third-party services [for these standards] coming up and I am happy that what we have specified are now here in the Asia-Pacific region to bring to people a new dimension and experience of watching television.”

— **Dr Peter Siebert, Head of Technology, DVB Project**



“There has been a huge increase in media consumption, with more hours watched across more platforms than ever before. The challenge, or opportunity, for media companies is to engage with audiences across this ever-increasing number of delivery platforms — profitably! As a key part of this, the transition to IP continues to be a hot topic, as does the viability of cloud deployments in the private, public or hybrid cloud.”

— **Tom Gittins, CCO, Pebble Beach Systems**



“We are seeing increasing demand for realism, which is the key for virtual studios. We have now reached a stage where we can do hyper-realistic — or photo-realistic, as it’s called — virtual studio sets.”

Another emerging trend is augmented reality (AR), which provides a level of enhanced programme content to attract viewers and maintain their attention. For example, Brainstorm’s InfinitySet was used to create 4K/Ultra HD (UHD) AR graphics for the opening ceremony of the Winter Olympic Games in South Korea.”

— **David Alexander, Commercial Director, Brainstorm**



# APB brings Show News to trade visitors

At select hotel lobbies, while waiting for transport, or on-board the shuttle bus, visitors and exhibitors were found reading the APB@ConnectTechAsia Show News even before arriving at the show venues.

Every night during the show days, the APB



editorial and production teams worked long and hard to report on the happenings at Broadcast-Asia and CommunicAsia so that, by morning, trade visitors could start bringing themselves up to speed with the latest industry news, views

and interviews.

The APB teams were supplemented by an equally hardworking group of young millennials who went out of their way to make sure that copies of the Show News got into the hands and laps of as many delegates as possible.

For those who were missed by our teams during the show, they could still take home a full set of the Show News for their colleagues and clients by simply downloading the three editions from [www.apb-news.com](http://www.apb-news.com).



## What's on Screen

### Nickelodeon Japan and MTV MIX launch on Amazon Prime Video Channels

**TOKYO** – Viacom International Media Networks (VIMN) has announced a channel distribution deal with Amazon, making Nickelodeon Japan and MTV MIX available on Amazon Prime Video Channels, a recently launched service.

Both channels are only available in Japan on over-the-top (OTT) video platforms, with Mark Whitehead, president and managing director, Asia-Pacific, Viacom, commenting: "OTT video services, like Amazon Prime Video, represent an exciting growth path for our flagship brands in a mature subscription TV market like Japan."



Nickelodeon Japan and MTV MIX are now available on Amazon Prime Video Channels.

### Sharp Objects debuts on HBO and HBO GO



**SINGAPORE** – HBO has converted *Sharp Objects*, a novel from Gillian Flynn, into an HBO Limited Series.

Available on both HBO and HBO GO, *Sharp Objects* stars Amy Adams, who plays reporter Camille Preaker. Returning to her small hometown to cover the murder of one pre-teen girl and the abduction of another, Preaker tries to put together a psychological puzzle from her past. In the process, she finds herself identifying with the young victims a bit too closely.

*Sharp Objects*, a novel from Gillian Flynn, is now available as an HBO Limited Series.

### CTE highlights Girl Power this August

**HONG KONG** – Celestial Tiger Entertainment (CTE) is highlighting the extraordinary abilities of women on the Kix channel next month.

Starring Amy Johnston, Courtney Palm and Dolph Lundgren, *Female Fight Club* centres on a former fighter who reluctantly returns to the life she abandoned, in order to help her sister survive the sadistic world of illegal fighting and the maniac who runs it.

Other highlights include *Twins Mission*, *Fight Valley* and *Divergent: Allegiant*.



Next month on Kix, viewers can catch a number of movie blockbusters highlighting Girl Power, including *Female Fight Club*.

## 2018 Calendar of Events

### AUGUST

August 22 - 25  
**BIRTV 2018**  
China International Exhibition Center, Beijing  
[www.birtv.com](http://www.birtv.com)

### SEPTEMBER

September 13 - 18  
**IBC 2018**  
RAI Amsterdam, The Netherlands  
[www.ibc.org](http://www.ibc.org)

### OCTOBER

October 2 - 4  
**APSCC 2018**  
Shangri-La Jakarta Hotel Indonesia  
<http://apscsat.com/>

October 9 - 11  
**IEEE BROADCAST SYMPOSIUM (BTS)**  
Keybridge Marriott Arlington, Virginia, USA  
[www.bts.ieee.org/](http://www.bts.ieee.org/)

October 25 - 27  
**BROADCAST INDIA 2018**  
Bombay Exhibition Centre, Goregaon, Mumbai, India  
[www.broadcastindiaashow.com](http://www.broadcastindiaashow.com)

October 29 - November 1  
**ASIA VIDEO SUMMIT 2018**  
Intercontinental Hong Kong  
[www.casbaa.com](http://www.casbaa.com)

### NOVEMBER

November 14 - 16  
**INTER BEE 2018**  
Makuhari Messe, Tokyo, Japan  
[www.inter-bee.com](http://www.inter-bee.com)

### DECEMBER

December 6 - 7  
**IABM ANNUAL INTERNATIONAL BUSINESS CONFERENCE & AWARDS 2018**  
The UK  
[www.theiabm.org](http://www.theiabm.org)  
Venue to be announced

### 2019

#### MARCH

March 4 - 7  
**ABU DIGITAL BROADCASTING SYMPOSIUM 2019**  
Malaysia  
[www.abu.org.my](http://www.abu.org.my)

March 12 - 14  
**CABSAT 2019**  
Dubai World Trade Centre The UAE  
[www.cabsat.com](http://www.cabsat.com)

#### APRIL

April 6 - 11  
**NAB SHOW 2019**  
Las Vegas, Nevada, USA  
[www.nabshow.com](http://www.nabshow.com)



## White Paper @ [www.apb-news.com](http://www.apb-news.com)

### ❖ Time travels: A closer look at PTP

Precision Time Protocol (PTP) is a system requirement for the latest IP media standards, including AES67 audio and SMPTE ST 2110 video.

This white paper from Artel describes key factors that must be considered for successful PTP deployments, including system architectures, PTP device configuration, and multi-cast network considerations.



An APB Special Publication

# broadcast technology

COMING WITH OUR DEC ISSUE

To participate contact:  
[kylie@editecintl.com](mailto:kylie@editecintl.com)  
[jessie@editecintl.com](mailto:jessie@editecintl.com)

# APB

CREATION



## Playbook streamlines newsgathering

The Associated Press (AP) is planning for the September 2018 launch of Playbook, a Web browser-based solution designed to help journalists not only plan news coverages, but also to create more efficiencies in the news production process. With the news environment also spreading to social media platforms, content producers need improved planning to manage text, video and photo coverage for publishing to social media, as well as online portals. The Playbook thus is designed to be scalable and customisable, depending on the size and resource of the news organisation.

## Calrec's Type R makes regional debut

At last month's BroadcastAsia2018, Calrec debuted Type R, an IP-based radio system. With the combination of standard networking technology and configurable soft panels, Type R allows users to customise systems according to their needs. Packed within a 2RU frame, Type R is integrated with I/O resources, and supports up to three independent mixing environments in a single core. Type R is also equipped with the ability to use multiple mixing engines, allowing users to deploy the IP-based system as independent studio consoles, microphone processors or utility mixing.

### Next Month @ Creation

Broadcast Monitors/  
Multiviewers

## PANELLISTS



**Dr Ahmad Zaki Mohd Salleh**  
Director Technical Operations  
TV Networks  
Media Prima



**Phan Tien Dung**  
CTO  
Vietnam Digital Television



**Mike Whittaker**  
Executive Vice-President  
and CTO, Asia-Pacific and  
the Middle East,  
Fox Networks Group Asia

# Newsrooms get more intelligent

As broadcasters continue to work in multiple formats and are increasingly controlled by tight budgets, emerging technologies such as AI are expanding the flexibility and functionality of newsrooms automation systems. **Shawn Liew reports.**



**T**o suggest that today's consumers are spoilt for choices when it comes to content consumption is, for all intents and purposes, an understatement.

Speaking with *APB*, Somu Patil, vice-president of sales, Asia, Grass Valley, says: "Consumers increasingly want access to news content in a range of formats — from social media channels such as Facebook and Twitter through to streaming live news on over-the-top (OTT) platforms.

"In fact, consumer viewing time on social media channels is projected to overtake the time spent on linear TV for the first time this year."

Media organisations thus have never been under greater pressure to deliver compelling news stories to their viewers anytime, and anywhere. To achieve this lofty goal, it is critical for media organisations to invest in newsroom technology that enables them to do this more effectively, Patil suggests.

He continues: "The right news automation system can help with cost-efficiency by automating simple processes. News broadcasters need to be able to offer real-time delivery of news and also support 24-hour multicasts. This is particularly difficult when it comes to unscripted news such as a sports game, an election or breaking news."

Grass Valley's news automation portfolio include Ignite APC, a "dynamic and powerful" automation tool that works to enhance any production environment with its flexible features and strong return on investment (ROI).



Patil goes on to highlight how a news automation system, built for the future of news, must be able to facilitate last-minute changes and allow production teams to deliver real-time cut-ins easily. "With productions varying, news automation systems also need to be intuitive and customisable to address any need."

One key solution Grass Valley offers is the GV Stratus, which has been recently upgraded to enhance broadcasters' ability to address changing consumer viewing habits, platforms and demographics. Social media integration, particularly, is a key focus for Grass Valley, who wants to allow broadcasters to address the critical need to deliver content as and how consumers want it.

According to Patil, GV Stratus provides the "most comprehensive" set of tools — from ingest to playout — with a high-speed parallel file system that was created to solve the daunting problem of sharing access to massive data sets for strategic use and analysis.

He continues: "With media organisations under greater pressure to deliver better quality content to more platforms on tighter budgets, infrastructures and workflows, we offer a wide range of industry-leading solutions that can suit any operation, regardless of its size, budget or business need."

Besides GV Stratus, Grass Valley's news automation solutions also include Ignite APC. While the former offers rule-based media asset management (MAM) that automates the management of media to outside resources and creates "powerful engagement" with current and potential viewers, the latter is a "dynamic and powerful" automation tool that works to enhance any production environment with its flexible features and strong return on investment (ROI).

Patil elaborates: "Ignite 11 offers a new event manager to control the look and feel across all sites in a group, ensuring consistency and allowing for the quick and easy creation of event libraries — reducing training and commissioning by up to 50%.

"This drastic reduction in resources required makes Ignite a very dynamic system, allowing productions to focus on content creation."

One technology that is slowly but surely improving the efficiencies of today's newsroom automation systems is artificial intelligence (AI), an assessment Patil agrees with. "Multi-platform, multi-format content is delivered much easier and quicker with AI, and the migration of technologies and platforms to the cloud also means that AI can help drive productivity," he says, adding that AI enables broadcasters to better understand the content in their live streams.

Furthermore, tasks that used to take broadcast facilities hours can now be handled in seconds; AI can also be used to identify, retrieve and aggregate data such as intricate speech and facial recognition to feed into the coverage of unscripted productions, Patil identifies. "Many news networks have to operate with limited staff, making the creation of high-quality content next to impossible. With AI, production teams are able to re-invest time back into content creation,



## NewTek supports IP-based newsroom workflows

Until the recent ratification of the standards in the SMPTE ST 2110 suite, the transition to IP has been a slow one, suggested Brian Olson, vice-president of product management at NewTek.

This, however, did not deter the company from working with Vizrt to offer IP-based newsroom workflows from as early as 2016. Olson described to *APB*: "The relationship between NewTek and Vizrt is a strong one. In addition to Viz graphics with NVG1, NewTek's IP graphics server, Vizrt has also added Mosart support for NewTek IP Series and TriCaster TC1."

Today, he believes that these initiatives are begin-

ning to pay off, as the flood gates have opened for discussions and new opportunities to move to all-IP workflows with either ST 2110, NewTek's Network Device Interface (NDI) standard, or both. "Adding the layer of best-of-breed production automation support with Viz Mosart is also energising business for both companies," Olson added.

As to the key features broadcasters are looking for in procuring newsroom automation systems today, he suggested: "Simplicity, ease-of-use, media object server (MOS)-connectivity and reliability are what broadcasters are demanding in automation for newsrooms today.



**NewTek is continuing to work with partners such as Vizrt to offer IP-based newsroom workflows. For instance, the Viz Mosart studio control system can be used alongside the NewTek IP Series and TriCaster TC1.**

"Gone are the days of dedicated operators for all the various functions in producing a newscast. Today's journalists have to multi-task, and applications that provide power with simplicity are going to rule the day."

and focus on increased engagement with viewers."

He goes on to highlight how Grass Valley's rules-based social media management feature is just one of the tools that enables production teams to prioritise the telling of strong stories that keep viewers engaged, rather than focusing on processes. "With the automation of Ignite, particularly in smaller workflows or stations, the impact of AI is all about the re-investment of resources to other areas of the production."

Another company that is a big advocate of AI for broadcast workflows is Spain's VSN, who is seeing a lot of workflow automation requirements in news productions that could be "substantially improved" via the application of AI.

Patricia Corral, marketing director, VSN, describes: "For instance, giving journalists the possibility of having access to a real-time transcription of an interview, press conference or plenary session could make a huge differ-

ence in their daily work, and allow them to pay attention exclusively to content creation, rather than to repetitive or secondary manual tasks that could be automated.

"Moreover, other advanced functionalities like face recognition or automatic recognition of quotes could help both journalists and video editors to make very advanced searches of video files and media much faster."

VSN has already begun to apply AI to improve the management and cataloguing of media. Over the past year, the company's VSNE Explorer MAM system has been integrated with the AI services from the likes of IBM Watson, Google Cloud and Microsoft Azure. "Thanks to these, we are now able to automatically detect and extract metadata directly from the media ingested in our MAM system in a matter of seconds," says Corral. "This way, users can have access to all metadata automatically detected, segmented per provider, and from a unique and single interface. This allows

**Spanish company VSN is a strong advocate of AI for broadcast workflows. Over the past year, the company's VSNE Explorer MAM system has been integrated with the AI services from the likes of IBM Watson, Google Cloud and Microsoft Azure.**

them to easily locate and select the results that best fit their needs with a few clicks, and afterwards catalogue or re-use the media accordingly."

To fully address the key requirements of news production, VSN is also focusing its product developments towards the cloud, 100% HTML5 platforms and towards "unlimited systems integration", Corral reveals.

For instance, the VSNE Explorer plug-in for newsroom computer system (NCRS) is a media object server (MOS) HTML5 Media Bus that allows users to access multiple features of VSNE Explorer MAM directly from the NCRS system of their choice. It allows users

to perform file searches directly from the NCRS interface in the MAM, and supports video editing and unification with graphics extracted from the user's computer graphics (CG) system, in order to prepare video pieces for broadcast from a single interface.

Another product that Corral is keen to highlight for news production is the VSNWedit Web video editor. Included within the VSNE Explorer MAM platform, it allows rough-cut video editing with basic effects directly in the MAM system, without having to switch to a non-linear editing (NLE) option.

Additionally, VSNWedit allows users to download an edit

decision list (EDL) to complete the video editing in an NLE system, if required. Conversely, an EDL file can also be imported from an NLE system into VSNWedit, if users wish to obtain video rendering.

Working together with the VSNE Explorer plug-in, users can quickly edit video pieces and drag & drop them to the NCRS of their choice — all from a single interface or in a 100% cloud environment.

Corral summarises: "The truth is that broadcasters today have to face a growing volume of work in record time and, of course, with tight budgets. The technological challenges that arise in the field of news production, therefore, are particularly relevant.

"From this perspective, VSN is not skimping on functionalities and high-end tech tools to incorporate into our product portfolio because we want to keep offering our customers the most advanced technological systems possible to face the aforementioned challenges." **APB**

## Postium excels with widest range of 4K/UHD HDR monitors

Postium, less than 20 years old, is already an established and trusted supplier of professional broadcast, movie and studio equipment. That is the proud record of the 1999-established South Korean company, which has developed, engineered and manufactured LCD rack monitors that are today widely used by broadcast stations and OB (outside broadcast) vans worldwide.

Sungil Cho, Postium's president and CEO, told *APB*: "We have the widest range of 4K/Ultra HD (UHD) high dynamic range (HDR) monitors, from 9" all the way to 55", and they have several unique and innovative features.

"We have recently developed and started the shipping of several of our range of new products, such as the versatile dual and quad monitoring solutions that have a range of 7"-55".

"We understand and appreciate the pressures facing today's



**Sungil Cho (right), president & CEO, and Poh Cheng Yong, VP Sales Asia, of Postium, were at BroadcastAsia2018 to highlight the company's range of LCD rack monitors.**

professionals, and the level of support they require. We try to take the load off our customers by using the latest technology to deliver solutions that match their technical, creative and budgetary objectives."

Poh Cheng Yong, the com-

pany's Singapore-based vice-president of sales, Asia, added that, in the course of the last decade, Postium has become a global leader in the field of broadcast monitors.

At last month's Broadcast-Asia2018, Postium gave pride of

place to its OBM-X310 31" Grade 1 true 4K/UHD HDR 4K monitor. Designed for professional production and post-production work, the OBM-X310 offers several advanced features.

Poh explained: "It supports various HDR gamma curves, such as PQ, HLG and S-Log3. The monitor also features a wide-viewing angle IPS panel, 4096x2160 17:9 aspect ratio, 1000cd per sqm high brightness, 1,000,000:1 high contrast, wide colour gamut (WCG), and various HDR formats, making it ideal for colour grading in a mastering suite.

"Moreover, it provides the industry-leading wide colour gamuts, complies with the DCI-P3 colour space with gamut ratio 114% and gamut coverage 99%, and supports the BT.2020 colour space. This ensures that colours are reproduced according to industry standards."

For budget-conscious customers who do not need a product this sophisticated, and are happy with something a little less in the premium range, Postium offers the OBM U Series 4K/UHD professional LCD monitors in five size: 9", 17", 24", 31" and 55".

"The OBM U Series offers professional performance, including excellent-quality black performance and accurate colour reproduction, which makes these monitors ideal for 4K/UHD live production, versatile monitoring and field production applications," said Poh.

"These monitors incorporate 12G-SDI input and loopout (x2), 3G/HD-SDI input and loopout (x2), HDMI 2.0 input and SFP optical connector. In addition, they support the integrated 3D LUT, waveform, vector scope, colour space and gamma comparison, and a full feature set."



## ITV selects TVT as media management partner

ITV, a UK broadcaster, has entered a strategic partnership with TVT, whereby the latter will provide a content management platform for the UK and international markets. Under this agreement, TVT will manage media logistics, content preparation and access services across all ITV's platforms, linking closely with the ITV team and its partners to process over 35,000 hours of content per year. Helen Stevens, director of broadcast and content operations at ITV, commented: "Being able to deliver the best possible experience for all our viewers is vital for ITV, and working with TVT to ensure that we have management of media distribution and access services across all our platforms is crucial to achieving that objective."

## Broadcast Solutions sets up Robycam Germany

Systems integrator Broadcast Solutions has transferred rental and sales of the Robycam cable camera systems to a new business unit — Robycam Germany. This newly founded division will be jointly managed by managing directors Philip von Senden and Stefan Breder. Also CEO of the Broadcast Solutions Group, Breder commented: "Rental business and productions with the Robycam system at major national and international events are growing, and with the new company, we can even better meet increasing customer requests."

**Next Issue @ Management**  
**Test and Measurement Solutions**

## PANELLISTS



**Fintan Mc Kiernan**  
CEO  
Ideal Systems  
South-east Asia



**Patrick So**  
Regional Manager  
Asia Pacific  
Magna Systems & Engineering



**Craig Johnson**  
Managing Director - Media  
Nielsen

# Is cloud the answer to the playout of tomorrow?

The role of playout systems has not changed much over the decades. It is still a simple transmission function responsible for delivering linear content from a broadcast network to its audience. But due to the entrant of over-the-top (OTT) platforms, media companies today have to also cater to non-linear programming. **Josephine Tan** finds out how the move of playout into the cloud is empowering broadcasters to evolve their operations to better meet the demands of today's audiences.

**T**he playout function has long been the focal point for broadcasters and other media companies across the globe, integrating content and monetisation aspects of the business including: ad sales, traffic and scheduling, playlists, stored files and automation.

While this function has been beneficial for decades, arguably, it is now restricting the flexibility of media companies to adapt to evolving business demands. This, Imagine Communications wrote in a new white paper, *Playout in the Cloud*, is exacerbated by the rapid onslaught of competitive video consumption alternatives, now widely available via the Internet and through over-the-top (OTT) providers.

The white paper further pointed out that barriers to entry have been lowered across all aspects of the business — including content creation, management, playout and distribution — resulting in new entrants adding pressure to established business models. In order for broadcast networks to extend their brands and content geographically, the white paper highlighted the importance for media companies to move beyond the traditional playout that has been geographically tied to facilities.

Steve Reynolds, president, playout and networking solutions, Imagine

Communications, tells *APB*: "Playout automation has been around for 30 years, or more. In its original form, it was precision-timed device control: the controlling system triggered actions in tape players, switches and many more. Although servers have replaced video tape recorders, the device control concept stayed for a long while.

"Today, we have the demands of multi-platform delivery, but we also have opportunities brought forth by software-defined architectures. We can build the functionality we need for various dynamic workflows from microservices running on commercial off-the-shelf (COTS) hardware platforms — on premises or in the cloud."

Imagine Communications has developed the Versio Platform, a cloud-native, microservices-based playout solution designed for IP and geo-dispersed environments based on COTS hardware. Powered by Zenium, Imagine's approach to technical adoption, the Versio Platform allows media companies to create a customised playout solution accordingly to their needs, accelerate the launch of new services, and adapt to market dynamics.

This media workflow platform features an HTML5-based user interface (UI) that provides access to content

workflows and playlists, enabling media companies to navigate through every aspect of their operations using a single UI. Operators can choose functionality, including playout engine, I/Os, automation and graphics, and can incrementally implement value-added options such as advanced audio track routing, multi-language captioning, 4K/Ultra HD (UHD) and proxy generation, on an as-needed basis.

"Media companies look at cloud as a way to scale into capacity, and there certainly are situations where buying cloud capacity as needed makes more economic sense," Reynolds continues. "For instance, if a media network is building for a fixed capacity — say, 20 channels of playout running 24/7 — then it is tough to argue with the economics of a Capex purchase. But if the network is looking for a usage pattern that is not 24/7, the cloud is pretty cost-effective."

One additional advantage of having cloud capabilities, according to Reynolds, is that it can provide overspill resources even if the main facility is on-premises. He explains that broadcasters around the world have already moved disaster recovery to the cloud with the understanding that this technology is ready to deliver virtually, even in the event the main facility fails for any reason.

He says: "Imagine has moved to a cloud-native, microservices architecture for our playout technology. When we can construct an air chain out of microservices, that microservices chain only needs to include exactly the things that the user wants to deploy. So, users are not paying for capabilities that are dormant in the software. They are not incurring the overhead of processing in memory and storage for features that they have no intention of using in that playout channel."

The ubiquity of content in multiple platforms has led to the development of more flexible software-defined solutions from broadcast vendors; at the same time, broadcasters have rapidly evolved to embrace online video platforms, integrating them with their linear transmission. As a consequence, the number of IP streams on live contributions and distributions are increasing, suggests Mariano L. Monteverde, managing director of Asrun Media.

Monteverde continues: "While production relies on uncompressed video streams, regardless if its SDI or



**Imagine Communications' Versio Platform is a cloud-native, microservices-based playout solution designed to empower media companies to create a custom playout solution according to their needs.**

“I believe that in the coming years, we are going to witness an evolution of cloud playout functionalities and UIs that simplifies operations even more, as we have seen with the channel-in-a-box (CiaB) or integrated playouts, connected with master control room automation systems.”

— Mariano L Monteverde,  
Managing Director, Asrun Media



the most recent IP protocols from the Society of Motion Pictures and Television Engineers (SMPTE), the major adoption of IP is happening for compressed streams at the transmission side. Latest on-premises playout systems provide hybrid SDI and IP I/O for MPEG-2 or real-time messaging protocol (RTMP), facilitating streaming to a content delivery network (CDN)."

Although the move to cloud offers several advantages, especially in terms of scalability and is a "good option" for turnaround channels, Monteverde quickly points out that existing cloud playout solutions for linear channels may present some constraints for broadcasters who require a variety of live content on the mix. He explains: "Operational challenges are still difficult to overcome at present for a set-up rich in live content. Thematic channels, on paper, are suitable with current

cloud applications, with the option for video-on-demand (VoD) for such types of content, hence giving further freedom to the audience.

"For general broadcast channels, further elements that playout systems usually integrate into the baseband domain are required. Some operators may ask: Where did my mixer or router panel go, or where is my multiviewer?"

"Thus, I believe that in the coming years, we are going to witness an evolution of cloud playout functionalities and UIs that simplifies operations even more, as we have seen with the channel-in-a-box (CiaB) or integrated playouts, connected with master control room automation systems."

Going forward, Monteverde is confident that cloud playout will be more accessible not solely for the reason of moving Capex to Opex, but also because it "poten-

tially reduces the overall associated costs in transmission, which is brought forth by the virtualisation of available resources". For early adopters of cloud playout, he recommends operators to invest in converting baseband feeds into IP Transport Streams (IPTS), and minimise the impact on the delay of processing these signals with Precision Time Protocol (PTP).

"Furthermore, it is important to assure that cloud playout provides a strong channel branding, closed and open captions, a preview channel, loudness control, play while uploading, up/down/cross-conversion or any standard

feature that is available in an on-premise CiaB," he concludes.

For SeaChange, the company has developed a new solutions portfolio, called cFlow, which equips video providers with a set of software capabilities that can be deployed in-house, in the cloud, or a hybrid of both. The SeaChange cFlow portfolio comprises four key solution families — namely cContent, cBridge, cAds and cView — that can be used together or individually to centralise and simplify the task of offering viewer experiences across multiple network and screen types.

Kurt Michel, vice-president

of marketing at Seachange, says: "The term 'broadcast' will become increasingly blurry, as viewers continue to seek experiences that combine live and linear content experiences with on-demand content and targeted advertising. So from a viewer's perspective, they are receiving a personalised, unicast experience. Broadcasters are using — and must use — the cloud to successfully make this shift."

Stressing that cloud-based solutions are increasingly playing an important part of media companies' workflow and delivery infrastructures, Michel explains that cloud may be used to add scalability to their in-house solutions. Alternatively, media service providers may also implement entire workflows in the cloud. "Flexibility and scalability are now critical for success," he concludes. "In our experience, there are many different approaches to delivering content to all of these devices. Live and linear content must have a real-time workflow, with possibly 10 or more versions of the stream being created and packaged for both IPTV and OTT adaptive bitrate delivery.

"VoD workflows can take a similar approach to linear, where a single high-quality asset is stored and the different versions are created on-the-fly, and in real time as needed." APB



SeaChange's cFlow portfolio of video management solutions provides a set of software capabilities that can be deployed in-house, in the cloud, or a hybrid of both. The four key solution families can be used individually, or combined to create a pipeline for advanced personalised viewer experiences.

## Lynx Technik adds new Testor app to greenMachine platform

Lynx Technik's greenMachine titan platform is now equipped with 12G processing to support 4K/Ultra HD (UHD) productions worldwide.

A four-channel hardware platform, titan provides 12G processing, as well as the ability to convert between single-link 4K/UHD video (12G) and quad-link 4K/UHD video (4x3G). For the signal processing functionality required for 4K/UHD productions, greenMachine users now have additional apps to support a 4K/UHD workflow. These include frame synchronisation, embedding/de-embedding, as well as up/down/cross-conversion.

Sebastian Schaffrath, chief technology innovation officer (CTIO) of Lynx Technik, explained: "Lynx Technik presented greenMachine titan at BroadcastAsia2018 as this four-channel processing platform, with downloadable apps for functionality, [matches] Asian market demands for 4K/UHD, flexible conversion, and future-proof infrastructures. We see very good market development in Asia with customers building highly sophisticated solutions and as greenMachine is app-driven, this solution truly redefines the way signal processing is handled.

"greenMachine [can] accommodate multiple functions for existing applications such as audio embedding and processing, colour correction,

frame synchronisation, and more, as well as for new applications such as high dynamic range (HDR)/standard dynamic range (SDR) or test signal generation."

Lynx Technik has also released the new Testor app for its greenMachine platform. The app is a trouble-shooting tool designed for technicians and engineers working in the field, post production, as well as a variety of other video source and cable testing.

Besides including multi-format test signal generator functionality, the Testor app also features logos and text insertion, including custom and user-defined graphics, static and dynamic test signals and patterns; advanced editor for logo and text layout design; and 16-channel audio test generator with adjustable level and frequency.

The Testor app is compatible with the greenMachine titan platform, and supports 12G, 3G, HD, and SD-SDI formats. When operating in 4K/UHD mode, the app is able to provide a single-channel test generator. For 3G video formats, the app offers four independent test generators with individual logo and text insertions.

Standard static and dynamic video test signals and patterns are also included with the Testor app, while user-defined signal patterns can be uploaded into the app.

## Win-Asia Software's winning formula for content creation & management

At last month's BroadcastAsia2018, Win-Asia Software demonstrated WinMedia, a radio and TV automation software that unifies the content chain by managing all aspects of media from acquisition and production through to distribution, marketing, planning and dissemination. By incorporating various intuitive and integrated modules, this "complete solution" allows users to ingest and produce content for radio, TV, Web and mobile in a single system.

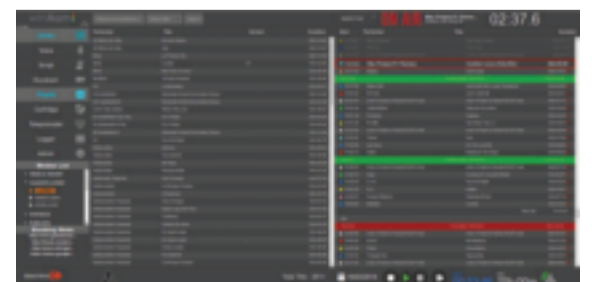
The company also showcased WinMAM version 2.0, an integrated newsroom computer system (NRCS) solution, which allows users to manage library, logger, voice track or playlist functions via the Internet. Directly connected to the central database, WinMAM provides journalists with the tools needed to create live newscasts. This Web 2.0 platform extends newsroom functionalities to the field while fostering collaboration.

Alongside WinMAM, Win-Asia Software also presented WinSales, a Web-based customer relationship management (CRM) software. Integrated with WinMedia, WinSales simplifies booking and billing operations by providing real-time online CRM, and a wide range of planning, management, billing and reporting options.

Completing Win-Asia Software's BroadcastAsia2018 showcase was WinLogger, the company's monitoring and logging solution. WinLogger offers a set of features to ingest and monitor content from various sources and formats, thus supporting broadcasters' and media networks' monitoring workflows.

Besides providing monitoring support, Win-Logger is able to facilitate content re-purposing with its advanced features, such as automatic segmentation and clip creation to maximise the use and value of media assets. WinLogger allows users to navigate within a timeline, search relevant content, add bookmarks and metadata, create and export clips for internal and external sharing, and finally re-purpose content in a timely manner.

Stephane Tesoriere, CEO of Win-Asia Software, said: "Monitoring content is never easy for broadcast authorities; this is the why we developed the WinLogger software solution. Users can now record and monitor any sources — such as audio, video, AM/FM, DVB-T and DVB-S — as well as edit, extract, archive their media from one or multiple sites. With our state-of-the-art finger-printing technology, users can do recognition of content, rebuild playlist, and transform speech to text."



Win-Asia Software's WinMAM is an integrated NRCS solution, which enables broadcasters to produce more news for a variety of platforms by managing end-to-end TV, radio and digital news production within a single system.



## ABS delivers Wimbledon via ABS-3A satellite

Global satellite operator ABS recently signed a capacity deal with MTI Teleport Munich to deliver live video coverage of tennis' Wimbledon Championships 2018 to Sky Deutschland, the rights holder for the German market. From July 2 to the tournament's conclusion on July 15, several simultaneous HD video feeds from the All England Lawn Tennis and Croquet Club in London were carried over the ABS-3A satellite, ensuring a permanent contribution link between the various production facilities in London and Sky Deutschland headquarters in Unterfoehring. The ABS-3A satellite has, over the past two years, established itself as a "prime conduit" for video contribution services in Europe, most notably in the German market, for which it distributes live coverage of German football for both public and private broadcasters, said ABS.

## Measat expands video neighbourhood in S Asia

Measat Satellite Systems has expanded its video neighbourhood in South Asia with the distribution of three Nepalese TV channels — News24, Sagarmatha TV and Prime TV. "The addition of these channels is testimonial to the trust broadcasters place on the strength of our distribution via our 91.5°E video hot slot," said Raj Malik, SVP, sales, Measat. The 91.5°E hot slot is home to the Measat-3, Measat-3a and Measat-3b satellites, forming one of the region's strongest video neighbourhood. From this position, Measat distributes 4K/UHD, HD and SD channels to audiences across Asia, Australia, East Africa and South-eastern Europe.

### Next Month @ Distribution

OB Vans

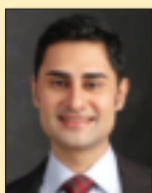
## PANELLISTS



**Martin Coleman**  
Executive Director  
Satellite Interference  
Reduction Group



**Amitabh Kumar**  
Director, Corporate  
Zee Network



**Shalu Wasu**  
Managing Director  
Eleven Sports Network

# STB technology changing media

While some observers are predicting an unstoppable migration to a media consumption world without set-top boxes, this may not necessarily be the case, as **Shawn Liew** discovers.

In many TV-consuming households in the world, one of the most recognisable, and essential, piece of equipment is the set-top box (STB) which delivers a myriad of channels to the TV screen.

However, as media consumption behaviours continue to be re-shaped by increasingly dominant video service providers such as Netflix, the STB is gradually being pushed towards obsolescence — or is it?

Media consumption continues to evolve globally, especially with mobile device video viewing on the rise, says William Ho, senior vice-president, Asia-Pacific and Japan, ARRIS. "However, consumers still prefer to sit back and relax when it comes to viewing long-form and sports content, especially at home," he tells APB. "In fact, in the past four years, average daily large-screen viewing has only reduced by four minutes. Additionally, consumers continue to prefer 'always on' TV, especially for the latest news."

The STB, thus, is designed to address these dynamics of TV consumption at home, and remains the hub for service providers to ensure they are delivering the quality and services that consumers expect. These, Ho says, include live sports and news content, as well as must-watch, live TV shows — particularly those with voting elements — where consumers can get the latest updates first-hand, rather than reading about them on other platforms.

Instead of a decline, ARRIS continues to see "robust growth" for STBs in global markets where operators in both developing and developed countries continue to invest in media distribution in the home.

Ho elaborates: "This is especially so with new consumer-friendly features

"Pay-TV operators are offering Internet gateways into the home that allow for the delivery of content through other connected devices ... Increasingly, they no longer require STBs."

— Jim O'Neill, Principal Industry Analyst, Ooyala

available today, such as STBs powered by Wi-Fi, delivery of 4K/Ultra HD (UHD) content or rich new user experiences that aggregate the desirable content that consumers expect.

"We are also entering into the era of the smart STB, where additional features such as the Internet of Things (IoT) Hub functionality and voice assistant will come into play."

Another company that is rather optimistic about the future of the STB is NAGRA, who does not see the rise in smart TVs corresponding to any decline in STB growth.

Hannu Impola, senior director, product marketing, NAGRA, describes: "In fact, both propositions are complementary and help service providers address different market segments and price points throughout the subscriber lifecycle."

Addressing both spheres, NAGRA is offering STB-less solutions such as the TVkey, which offers ease-of-installation (no cables) and ease-of-use (single remote), and provides access to both 4K/UHD broadcast and over-the-top (OTT) content.

On the other hand,

direct-to-TV solutions are dependent on the functionality of the TV set in providing a full service offering, and they can be limited in terms of user interface customisation options, Impola observes. "Insufficient customisation can be an issue for high-end subscribers," he adds. "In addition, TV set manufacturers are struggling to change their processes to support several successive device/OS generations on the same hardware."

Unlike other consumer electronics equipment, not all TV sets get replaced by new models on two- to three-year cycles. "Therefore, for ultimate reach and control of the customer experience over the subscriber lifecycle, the STB is still the best option," Impola suggests.

STBs were critical to operators' 'walled-garden' approach to content delivery, says Jim O'Neill, principal industry analyst, Ooyala, who describes an STB as "an expensive piece of hardware that has been a boon for pay-TV providers and a bane for consumers who have had to rent them on a monthly basis."

In the Asia-Pacific region, for example, the cable pay-TV industry is continuing to grow; however, operators are increasingly looking to become part of the OTT ecosystem. O'Neill elaborates: "They are offering Internet gateways into the home that allow for the delivery of content through other connected devices such as Apple TV, Roku,



The set-top box remains the hub for service providers to ensure they are delivering the quality and services that consumers expect, says William Ho, senior vice-president, Asia-Pacific and Japan, ARRIS.



# evolves to address consumption behaviours

connected TVs and, of course, mobile devices — increasingly, they no longer require STBs.”

Citing the example of the US, where Netflix’s subscriber base has already surpassed that of cable TV, O’Neill says this is indicative of a growing trend that viewers’ tastes have changed in favour of OTT. “In Asia-Pacific, the OTT growth is being fuelled by cable operators who have more readily adopted OTT as a partner. Consumers today have plenty of content options, convenience and lower costs with OTT services.”

As a company, Ooyala says it has been at the forefront of shaping the OTT revolution in the past decade, by powering the production, publishing and monetisation of media for major broadcasters and media companies, and offering a platform that has allowed pay-TV operators to grow with OTT.

O’Neill says: “As OTT adoption continues to grow, we have evolved our solution to a single platform — the Ooyala Flex Media Platform — which connects the entire content supply chain for a broadcaster or content owner. To ease the migration process for an STB operator, Ooyala Flex Media Platform supports an extensive list of media file formats and asset packages.

“The digital video playout solution within the platform provides OTT applications for an operator to launch a service quickly, and to provide a great experience for their consumers across all digital devices.”

In order to be able to offer a “smooth video streaming experience” for their viewers, Ooyala advises broadcasters to begin to adopt proven, enterprise-ready cloud solutions. Some key considerations, O’Neill lists, include the ability to stream live events, minimise latency in video start-up and loading times, and minimise buffering during playback.

Providing a great user experience and relevant content recommendations are also critical to drive viewer engagement for a cloud-based OTT service, he adds, before concluding: “As broadcasters deal with complexities in content formats and deliveries,



“Both [STB and STB-less] propositions are complementary and help service providers address different market segments and price points throughout the subscriber lifecycle.”

— Hannu Impola,  
Senior Director,  
Product Marketing,  
NAGRA



NAGRA's TVkey solution utilises hardware root-of-trust (TEEs) in TV systems-on-chip (SoCs), and implements a secure video path that prevents content stealing.

automation can streamline their entire content supply chain, from production to monetisation.”

As for ARRIS, the company is continuing to innovate in the STB space, particularly on voice-enabled devices, as well as more integration between high-quality video and audio experiences. “We have a strong and rich pedigree in video, and with patents and intellectual property across a range of video-enabling technologies — both in the home and in the network,” says ARRIS’ Ho. “We are the global leaders in STB sales and this requires us to support all modes of delivery that are used in various markets. This ranges from quadrature amplitude modulation (QAM) and digital video broadcasting (DVB) to IP to hybrid modes, and from multi-cast to OTT.”

The move to IP and OTT delivery of video, he adds, is also playing into ARRIS’ strengths, as the company continues to actively help operators make the transition not just in the home, but also

across the entire network.

To further ensure operators can delivery high-quality, 4K/UHD video in the most efficient way, ARRIS also supports all the latest compression standards, Ho reveals. “Our leadership in fibre-deep technology, as well as video headend equipment, gives us a unique ability to optimise this entire chain,” he adds. “We also continue to invest heavily in the STB space with a strong shift to IP-enabled devices.”

Ho also attributes ARRIS’ continued success to a new range of products and hybrid STB boxes offering consumers and operators “considerable choices” in terms of design, functionality and middleware/user interface options offering a rich user experience. “We

remain bullish about the prospects of video from a global perspective while recognising that the picture continues to evolve in different markets,” he says.

As a provider of ‘premium content security’, NAGRA aims to ensure that ‘all devices’ in the market that offer consumption of premium content have a level of security that is second to none, says NAGRA’s Impola. “By providing multiple complementary solutions to service providers, we ensure that they can improve their reach, making sure that both their broadcast and streamed premium content is fully secured on all devices for all commercial scenarios,” he adds.

Addressing the question regarding the managed versus unmanaged device, and how pay-TV operators now manage a mix of both on their network, NAGRA is continuing to make investments and working with chipset and TV manufacturers, to bring the level of security robustness of smart TVs to the level of managed services, including support for 4K/UHD content distribution.

“That’s the main driver for TVkey utilising hardware root-of-trust (TEEs) in TV systems-on-chip (SoCs), and implementing a secure video path that prevents content stealing,” says Impola. “We provide a similar solution for other connected devices — PCs, tablets, smartphones and game consoles — that offer hardware-based security. For devices that don’t yet offer a TEE, we supply a software-based secure player solution in our OpenTV Player.”

NAGRA also recognises how managed devices ensure more control over the user experience and security features throughout the full lifecycle of the device. This, he explains, is why the company is continuing to develop security for STBs, including Android TV-based devices — whether pure OTT or hybrid broadcast OTT solutions — to enable compelling

user experiences on the big screen. “We have the widest selection of security-certified STB designs and we are further expanding our line-up by building STB reference designs with the most successful chipset vendors,” Impola reveals.

And to build on its vast pedigree in ‘all things TV’ as the broadcast TV and streaming video industries converge, NAGRA is today catering to an all-IP market, without neglecting its traditional broadcast heritage.

“We anticipated this shift and started investing in IP-based solutions nearly a decade ago, providing IP streaming security and multi-screen user experience solutions to our customers,” says Impola.

Currently, NAGRA’s content value protection ecosystem encompasses cloud-based services for media asset management (MAM) through the Dvnr brand; conditional access/multi-digital rights management (DRM) through the NAGRA and Conax CAS/DRM product lines; watermarking through the NAGRA Nexguard brand; and NAGRA anti-piracy services for protecting the entire content production and delivery ecosystem.

The company also delivers packaged, cloud-based and secured OTT solutions such as Conax GO Live and OpenTV Signature Edition, which enable a complete set of linear and on-demand TV services. Crucially, all these solutions make use of the NAGRA Insight data analytics and artificial intelligence (AI) platform to maximise the value of data in a connected environment, enabling the digital transformation for NAGRA customers.

Impola concludes: “Even though they are happening at a slower pace than it might look on the surface, significant changes driven by the second digital transformation of the pay-TV industry are happening.

“Therefore, we are committed to supporting any legacy broadcast scenarios until the end of their useful lifecycle while guiding operators today in taking their services hybrid or all-IP, or helping operators launch new all-IP propositions.” **APB**

To build on its vast pedigree in ‘all things TV’ as the broadcast TV and streaming video industries converge, NAGRA is today catering to an all-IP market, without neglecting its traditional broadcast heritage.

# Taking news from its linear roots to a new digital age



Somul Patil is Vice President, Sales Asia, Grass Valley.

BY SOMU PATIL

News is now delivered in real time to consumers at every minute of the day. There is more content than ever before that broadcasters are required to process in more formats and for more outputs. News production includes live and on-demand development and delivery for mobiles and tablets, among other devices, and on social media platforms.

Market penetration of mobile devices particularly is on the rise with 1.81 billion users expected in Asia-Pacific by 2021. Content owners and distributors now must think about creating, controlling and connecting content beyond a pre-determined linear slot. A one-size-fits-all approach no longer works when it comes to multi-platform and multi-format content delivery.

It is not a stretch to see that the impact on broadcasters will be significant. While all of these dramatic changes to the media landscape continue to unfold, the budgets that enable broadcasters to meet this insatiable consumer demand are shrinking. The challenge, as always, is to try to do more with less; it is essential that broadcasters make the best use of their resources.

From social media management to IP and remote production, there are advanced systems and tools to help news broadcasters juggle and balance all of these critical elements.

## Making social simple

News broadcasters must handle breaking news as it happens, adapting as events continue to unfold and delivering more in-depth angles to engage and retain viewers. Newsroom systems therefore must be flexible and robust enough to deal with last-minute changes and handle unscripted live inserts smoothly.

One of the biggest challenges broadcasters are facing today is that many newsroom systems are still not properly equipped to handle content generation, management and delivery for digital environments. Meeting consumer demand for news delivery to social and online platforms often results in adding numerous applications to what is already a very complex workflow. This means content often has to be individually uploaded to different Facebook, Twitter and YouTube accounts, which costs time, drains resources and impacts newsroom efficiency.

To feed the 24/7 news cycle, broadcasters need more staff in

the field to report on stories as they happen. Having more intuitive systems in newsrooms and outside broadcast (OB) facilities means more people, such as reporters, producers, camera operators and other in-the-field personnel, can gather breaking news and seamlessly produce more content in multiple formats such as social media.

Broadcasters need to be able to seamlessly integrate social media management into their daily media management cycle, taking the number of applications needed to achieve this down to just one. By simplifying their workflows, each network can seamlessly publish and promote content that has been optimised for the wide variety of content platforms, among them the many social media platforms such as Facebook, Twitter, Periscope and YouTube. Not only does this enable broadcasters to better respond to what consumers actually want, but they can achieve this without the need for a lot of extra resource.

## IP: Meeting new challenges with agility and scalability

The adoption of IP technology for broadcast applications is key to agility and scalability. It is no longer a question of why to transition to IP-based platforms, but rather when and specifically how, to transition from SDI.

IP-based infrastructure, and the use of standard commercial off-the-shelf (COTS) hardware, offer the scalability and flexibility that broadcasters need so they can meet consumer demand for new content services in an agile way. However, the full extent and real benefits of this agility have still yet to be realised. If broadcast is to survive in an environment where multi-format and micro-channel content is becoming a significant market presence, infrastructure must reach a level where it is simple to experiment with content types, as well as production and distribution methods.

The introduction of industry standards, led by the Alliance for IP Media Solutions (AIMS), has been instrumental to this.

The standardisation of SMPTE ST 2110 has been critical to providing broadcasters with confidence to adopt IP-based solutions, and has created interoperability between manufacturers, eliminating the need

**Remote production is typically seen as a way to drive cost reductions, requiring fewer people to travel to a remote site — IP greatly supports such workflow innovations.**



**Whatever technology broadcasters choose to deploy, one thing remains unchanged: news is all about getting the stories that matter most to relevant audiences in a way that meets their needs.**

for separate SDI and IP switching/routing infrastructures. 2110 has also helped facilitate greater bandwidth efficiency, reliable, fast SDI-level performance, and separate video and audio processing, among other critical workflow components.

All of this makes IP a much more compelling solution, giving broadcasters the ability to easily and cost-effectively scale-up to support new services. There is a real competitive advantage for broadcasters of any size to capitalize on the agility offered by IP-enabled applications. These include remote production, distributed production and real-time publishing to Web, social media and over-the-top (OTT) platforms.

## Getting closer to the action

Delivering immersive content to a variety of platforms comes at a cost, requiring large production teams and sometimes multiple outside broadcast (OB) vehicles. When you add in the logistical and pre-event set-up requirements, this becomes a very expensive undertaking. With budgets getting tighter, broadcasters are under pressure to maximise the value of their content.

Remote production is typically seen as a way to drive cost reductions, requiring fewer people to travel to a remote site. IP greatly supports such workflow innovations. Remote access to central servers and the ability to edit packages means broadcasters

can use their equipment and resources more effectively. The same production team and equipment can be deployed to support multiple coverage locations within a given period, saving valuable time and helping with faster story churn.

Browser-based editing solutions can be used anywhere with an Internet connection on laptops, phones and tablets to create and edit stories with simple effects and voice-overs and other key features on-the-go. All of this means less time-to-air, allowing audiences to get up-to-the-minute news as it unfolds.

## Keeping content compelling and relevant

As newsroom and other news production facilities adapt to how audiences consume content, they are looking for scalable, customisable solutions that help them meet demand. From the move to more virtualised production and growing penetration of social media channels as a news output, the ability to deliver breaking news demands a fast, efficient workflow and reliable automation to handle updates and last-minute changes.

Whatever technology broadcasters choose to deploy, one thing remains unchanged: news is all about getting the stories that matter most to relevant audiences in a way that meets their needs. Thinking bigger and beyond the traditional linear approach to respond to evolving consumption trends is necessary. This means creating, producing and delivering content at appropriate times, on appropriate platforms and in appropriate formats. □

# Newtec set to boost satellite performance for broadband and broadcast

As the satellite industry continues to be marked by uncertainty, Newtec showcased a range of satellite solutions at last month's ConnextAsia2018. These, said the company, help broadcasters and service providers enhance efficiency and performance, thus maximising the potential of their business.

One of the solutions that Newtec demonstrated at the show was the new Satellite Network Calculator. Designed to give users the power to analyse performance and evaluate potential gains made by their satellite network in new markets, the Satellite Network Calculator provides insights from the planning stage of a new network all the way up to optimising and implementing an established network.

This, in turn, maximises the operator's business potential by displaying how different elements of the network would affect bandwidth consumption and, therefore, cost and capacity, said Newtec.



Used for distribution and contribution broadcast applications, the MCX7000 multi-carrier satellite gateway platform is able to function as a quadruple modulator or modem with dual demodulator.

Optimum efficiency and performance were also top of Newtec's agenda at the event, as it offered the Newtec Dialog Mobility Manager. With the Mobility Manager, Newtec is taking a new approach by centralising the process at the network operations centre (NOC), giving operators control over all terminals and beams on the network. The behaviour of the Mobility Manager is configured through a rules-based engine, allowing network operators to customise the logic to match their business needs and priorities.

The Newtec Dialog Mobility Manager includes the ability to switch between different satellite beams. Incorporating a set of application programming interfaces (APIs) to provide control over beam switching logic, facilitate network load balance, routing and regulatory compliance, the Mobility Manager overcomes the limitations of previous systems and brings further gains through capacity sharing, which is enabled by Newtec's Mx-DMA technology.

To further enhance efficiency, Newtec highlighted its DVB-S2X



Designed as a HTS modem, the Newtec MDM2510 IP satellite modem supports a wide range of services including Internet/Intranet access, VoIP, backhauling, mobility, contribution and multicasting.

modem portfolio, which enables satellite operators to optimally address any market or application from a single network. Offered under this portfolio is the Newtec MDM2510 IP satellite modem, a high-throughput satellite (HTS) modem that supports a wide range of services including Internet/Intranet access, voice-over-IP (VoIP), backhauling, mobility,

contribution and multicasting.

Completing Newtec's showcase at ConnextAsia2018 was the MCX7000 multi-carrier satellite gateway. Used for distribution and contribution broadcast applications, the MCX7000 multi-carrier satellite gateway platform is able to function as a quadruple modulator or modem with dual demodulator, while the optional Advanced Encryption Standard (AES) encryption of the baseband frames provides protection for closed networks.

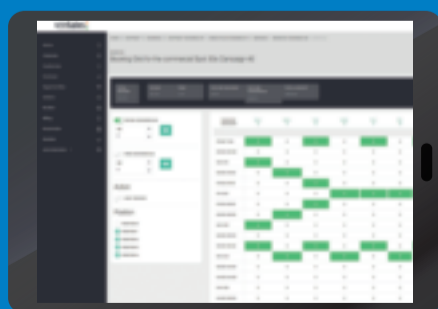


# winSales

OFFERS YOU THE NEXT LEVEL FOR A CRM AND TRAFFIC SYSTEM :



## COMMERCIALS & DIGITAL



BOOKING



QUOTATION



CUSTOMER RELATION MANAGEMENT



BILLING AND STATISTICS

**WINGROUP SOFTWARE**

BATIMENT B - ATHELIA IV  
375 AV DU MISTRAL - 13600 LA CIOTAT - FRANCE

[WWW.WINMEDIA.ORG](http://WWW.WINMEDIA.ORG)



# APB

## X-PLATFORM

### Alpha Networks acquires Hubee

Alpha Networks, a solutions provider in hybrid TV backends, has acquired Hubee, a Paris-based software-based company specialising in smart video platforms and user experience solutions. In addition to the expansion of the capabilities of Alpha Networks' tucano software platform, the acquisition will also bring additional video expertise to Alpha Networks, particularly ad-insertion features and EPG services, strengthening the company's position in the digital TV marketplace. Kris Warren, CEO of Alpha Networks, said: "This acquisition will allow us to deliver additional value to our customers and partners by providing them with competitive solutions and TV expertise for increased content monetisation."

### Orange taps Broadpeak for advanced video service delivery



Orange, an operator of mobile and Internet services in France, has chosen to deploy the

Broadpeak's BkS350 origin packager and recorder to power the delivery of advanced video services. The BkS350 is capable of recording linear services in one format, and dynamically packaging the content in the requested ABR format. In addition, Orange will also utilise Broadpeak's BkS400 HTTP video cache servers and BkM100 video delivery manager.

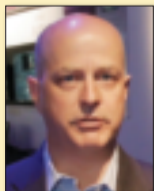
### Next Month @ X-Platform

#### Cloud-Based Broadcast Solutions

### PANELLISTS



**Chong Siew Loong**  
CTO  
StarHub



**Michael Cronk**  
Chairman,  
Alliance for IP Media  
Solutions (AIMS)



**Peter Bithos**  
CEO, HOOQ

# Personalisation Empowering

The main goal of a media network has always been to deliver content to mass audiences, despite the disruption to traditional media workflows from the emergence of online video platforms. However, technologies such as big data are now enabling operators to present their content to viewers differently — by personalising content to viewers' interests while allowing viewers to customise their own selections and content preferences.

**Josephine Tan** writes more.

PHOTO CREDIT: ISTOCK BY GETTY IMAGES



To help viewers navigate through its content library, media companies may leverage big data technology to better understand its audience, by creating a personalised viewing experience to each individual viewer.

**C**ontent personalisation is critical for an over-the-top (OTT) service like Malaysia's tonton. With content personalisation, tonton is able to engage users to stay on their platform for longer periods as they consume content relevant to their needs, declares Airin Zainul, director, tonton and licensing and merchandising, Media Prima.

Content personalisation, Airin tells APB, is very important in enabling tonton to reach out to the local market. "By understanding the wants and needs of a market, tonton is able to create relevant homegrown content to keep our viewers satisfied," she explains.

Since tonton's inception in 2010, it has been home to more than 36,000 hours of content consisting of Asian and international dramas, variety shows, entertainment programmes, and live TV. The video streaming service has also expanded its footprint regionally into countries such as Brunei and Singapore, and has garnered 7.8 million subscribers to date.

In enhancing viewers' overall experience, tonton has been working closely with Media Prima's data team in Media Prima Digital, a digital media subsidiary of the

Malaysian media company, to leverage big data to make informed decisions.

Furthermore, tonton has also established a strategic partnership with Camment, a Finnish digital company, to amplify user engagement on its platform. Under this partnership, tonton is utilising video messaging and artificial intelligence (AI) in driving higher social engagement between its 7.8 million subscribers. The AI feature of Camment's technology also recognises faces and voices of the audience, allowing tonton to monetise using their curated content, serving targeted ads and enriching today's TV experience.

Airin continues: "tonton has continuously improved its platform by evaluating available vendors to suit our needs. For instance, our partnership with Camment supports new engagement features, such as allowing users to engage with their social media circles.

"We are confident that this will enrich the viewing experience of our customers and subscribers, and this will only solidify tonton's appeal on the regional and international OTT grid. Our next plans include expanding further tonton's content and brand presence across 100 countries worldwide, and the launch of a global app later this year."

Another broadcaster who aims to reinvent its approach in delivering its content is the BBC. In the *BBC Annual Plan 2018/19* report, the British public service broadcaster outlined its plans to enhance iPlayer, an Internet streaming, catch-up TV and radio service. The BBC stated that new competitors have established the "new normal" for online video, resulting in audiences expecting extended availability for TV programmes beyond just catch-up. Furthermore, today's audience wants "familiar, wind-down" content that is easy to find and binge on, and they expect state-of-the-art personalisation, user experiences and recommendations.

The BBC also emphasised in the report that iPlayer needs to change, and detailed its approaches in reinventing the service. Personalisation is right now at the heart of iPlayer's design; currently, 15 million people sign in monthly, looking for the services they want. Some of the enhancements these users will be seeing this year include enhancements to the user experience, more personalisation, and more live content. Moving forward, the BBC will make its digital content more tailored through the personalisation of its news app and stories that are easier to discover while experimenting with techniques, including interactive video



tonton, Media Prima's video streaming service, is packed with over 36,000 hours of content ranging from dramas to variety shows and live TV. The streaming service has also produced its original series, such as *I, Remember*, which is exclusively available on tonton.



# and customisation: audiences with more control

and voice recognition.

Personalisation and customisation are key approaches in empowering media companies to navigate through today's evolved media landscape. For instance, one strategy to differentiate an OTT service is to target content and messages that are different for each viewer, suggests Chris Wagner, executive vice-president of NeuLion.

He explains: "To do so, the digital platform must be equipped with advanced personalisation services to give viewers the opportunity to fully customise their own experiences, which are catered to their own interests. This not only gives them full control of what they want to watch, when and how they want to watch it, but also drives them to consume more content for longer periods of time, giving the content owner more monetisation opportunities."

In order to provide such experiences, big data is required to allow operators to better understand their audiences. Suggesting data as the "secret sauce" in enabling OTT service providers to attract and retain viewers, Wagner says that data will allow operators to evaluate their services and make informed decisions on content and marketing communications.

"The data consists of customer profiles, subscription data, transaction data, methods of payments, external data from Facebook, Amazon and other sources, as well as quality of service and quality of experience metrics," he adds. "These big data metrics, when pulled together, are critical for media companies to drive programming effectiveness, marketing tactics, audience initiatives and more, resulting in increased customer loyalty, lifetime value and higher conversation rates."

Benedicte Guichard, head of marketing at Cleeng, agrees on Wagner's point on the opportunities personalisation and customisation may offer, and elaborates: "OTT operators nowadays have rich data about viewer preference, engagement and satisfaction, and the best use of that data is to tailor services to different segments of viewers. The one-fits-all model does not quite fit the new behavioural trends, where viewers consume content from various devices



**“With enhanced personalisation capabilities and deep recommendation services, the viewer should have the ability to create their own watch lists, favourites, bookmarks, and set their preferences to curate content custom to them.”**

— Chris Wagner, Executive Vice-President, NeuLion

and platforms.”

Apart from providing greater clarity and insights into viewers' behaviour, she highlights that data also gives operators ammunition to tackle churn. "Knowing exactly why subscribers left the service can help operators to improve their offerings through fine-tuning their content strategy, improve streaming quality and adjust marketing target," she adds. "Retaining subscribers will then prove to be much less costly and more profitable in the long run. Every broadcaster that operates in the traditional and the OTT space invests a lot of resources and energy to reduce viewer churn. By minimising churn, operators obviously boost revenues, but also set the base for more accurate forecasting and design loyalty programmes."

To help operators address this challenge, Cleeng developed Churn IQ, which enables media companies to address churn at all the stages of the customer journey, starting from log-in to payment and consumption and editing with customer care. This prediction and action solution is equipped with the ability to break down the causes of churn in three main categories — payment, engagement and satisfaction — empowering companies to utilise data to address issues at churn.

Today, the personalisation of a user's experience is essential to retaining viewership. However, content catalogues have reached such large sizes that traditional browsing and searching is "ineffective and frustrating", claims Marc Bruce, managing director, APAC and EMEA, of Encompass Digital Media.

He explains that navigational strategies that work well on mobile

and other interactive devices does not necessarily translate well to traditional TV environments. Additionally, terrestrial restrictions that limit a user's ability to consume content based on device type or location also attribute to a poor overall experience and is a significant source of churn.

Therefore, he recommends media companies to pay careful attention to these aspects and other experience-related challenges to ensure they are adapting to the viewers' needs and extending the lifetime of the viewer.

"Ultimately, the value proposition for media companies is to replace, maintain and grow subscribers by providing high-value content to viewers when and where the viewer wants," says Bruce. "As the number of viewing platform options grows, so does the viewer churn. The lifetime value of a subscriber is no longer measured in years but months. Content providers must adapt to

this new normal by offering the right mix of viewing experience and personalisation at a price point that works for both the viewer and content provider."

From a viewer's perspective, the value proposition of personalised content is solving the problem of multiple choices and navigational challenges in traditional TV environments, he continues. "Creating a similar, seamless experience with traditional TV interfaces and remote controls is becoming essential to improving a user's overall experience."

While retention may be the new acquisition, NeuLion's Wagner points out that there is more to persuading subscribers to stay on that particular platform. He says: "To acquire new subscribers, marketing efforts must be in sync with viewer preferences — not just personalisation, but also recommendations and advanced features that offer the viewer exciting ways to interact with the content."

"With enhanced personalisation capabilities and deep recommendation services, the viewer should have the ability to create their own watch lists, favourites, bookmarks, and set their preferences to curate content custom to them."

In today's marketplace, he adds, OTT service providers have been offering viewers advanced personalisation features which, in turn, provide "genuine" viewer attraction and engagement, thus increasing customer retention.

"When a rights holder creates a personalised, interactive OTT experience across multiple devices, they see longer viewer engagement sessions, which ultimately increase retention," he concludes.

In addition to big data providing media companies the ability to discover patterns and trends of viewers' consumption habits, Encompass' Bruce highlights that metadata is another key aspect in driving personalisation and customisation technologies.

He says: "Generating additional, accurate metadata about content is a key factor driving improvements in categorisation, thus matching viewers' habits and preference. While most metadata is editorially curated, the use of AI and cognitive services to derive implicit metadata by analysing the content is likely to form a key differentiator for personalisation. Such capabilities will allow for unexpected and non-trivial content matches that could lead to increased engagement."

In addressing the delivery of content to multiple screens, Encompass Digital Media has utilised Microsoft Azure to power its CloudVOD service, a cloud-based video-on-demand (VoD) solution. The CloudVOD platform enables content owners, TV networks, OTT operators and other digital service providers to manage the VoD processing lifecycle.

Leveraging Encompass' automation technology and the flexibility of the cloud, CloudVOD is able to ingest and manage content files, transcode files into required formats, transform metadata into multiple formats, and package content with metadata and encryption. With this solution, content providers can focus on their core capabilities of delivering content to consumers, while CloudVOD manages the processing requirements and multiple technology standards inherent in OTT distribution.

"CloudVOD is an underpinning service that processes content and its associated metadata to numerous formats that support the large and growing range of service platforms. Ultimately, multi-screen and multi-device delivery rely on a strong and flexible online video platform environment," Bruce concludes. **APB**



**“OTT operators nowadays have rich data about viewers preference, engagement and satisfaction, and the best use of that data is to tailor services to the segments of viewers.”**

— Benedicte Guichard, Head of Marketing, Cleeng

# Start to make your way into the all-IP era

On a visit to the APB booth at BroadcastAsia2018, Matthew Goldman, president of the Society of Motion Picture and Television Engineers (SMPTE), and senior vice-president of technology, TV and Media, Ericsson, urged broadcasters to begin to look at IP, even if they are not ready to make a full transition yet.



When the transition from analogue to digital first started more than 30 years ago, many broadcasters did not jump on the digital bandwagon straight away, said Matthew Goldman, president of the Society of Motion Picture and Television Engineers (SMPTE), and senior vice-president of technology, TV and Media, Ericsson.

Visiting the APB booth at BroadcastAsia2018, he added: "What happened then is repeating itself where the IP transition is concerned. We are at an early adoption stage, and for many broadcasters who are not doing anything beyond 1080p right now, there is no rush for them to move to IP."

While acknowledging that 12G-SDI is currently able to handle

many of today's broadcast workflows, Goldman urged broadcasters to ask themselves: "Where do I see myself in the near future?"

He elaborated: "If you are intending to build a 12G-SDI plant now, are you also planning to invest in IP in two to three years? To realise software-defined networks and virtualisation, you need to move to IP. While this transition can be more expensive to implement now, this will not be the case in two to three years' time."

One key development that is expected to provide a real boost to IP adoption is the creation of the SMPTE ST 2110 suite of standards, titled Professional Media Over Managed IP networks. The new standards suite describes the carriage of video, audio

and ancillary data — all co-timed and related to each other so that everything can stay in sync — while maintaining the flexibility to run on generic IT infrastructure.

And even if you are not ready to migrate to IP now, start learning about it, and understand what it can do for you, Goldman suggested. Another key aspect of the IP transition, he added, is the training required for broadcast engineers. "Education is a key aspect in the IP transition, and this is why initiatives such as the IP Master Class, organised by APB in Singapore a day before BroadcastAsia2018, can create real value for the industry."

To read more about the APB IP Master Class, turn to pages 9-12.

## Adder Technology launches ALIF100T to speed up IP migration in APAC

To support the transition to IP, Adder Technology is now offering the ADDERLink Infinity 100T (ALIF100T).

Complimenting Adder's existing ADDERLink Infinity range with a zero U option, the ALIF100T simplifies the upgrading process of keyboard, video and mouse (KVM) systems from analogue to digital while freeing up crucial rack space. The transmitter is particularly popular among operators who are looking to update their current solutions, but are hindered by lack of space or the cost of redesigning their infrastructure.

Loki Ong, vice-president of sales, Asia-Pacific, Adder Tech-

nology, told APB: "We showcased the ALIF100T at BroadcastAsia2018 as this forms a part of our main theme *Take back your rack with ALIF100T*. This is a zero U form factor transmitter with very low power consumption."

Designed as an IP-based, USB-powered KVM transmitter, the ALIF100T KVM transmitter can either be plugged directly into any computer, or hung from the back of the source. Furthermore, the transmitter can also be retrofitted into existing infrastructure, thus not taking up any unit space if rack-mounted, according to Adder.

"In Asia, the benefits of IP are

well understood, yet migration is often hampered through lack of space," Ong added. "With news that Japan will broadcast the 2020 Olympics in 8K, Asia is really waking up to the industry's need for change, and we are very excited to see the market's reaction to this radical new product."

The ALIF100T can also be installed in outside broadcast (OB) trucks that have even less space internally than larger data centres. Moreover, the transmitter allows broadcasts to link its OB units together to create a streamlined workspace from just one source.

This new ADDERLink transmitter adds to the company's existing



Left: Adder Technology was at BroadcastAsia2018 to highlight the benefits of IP over KVM.

Below: The ALIF100T (inset) is an IP-based, USB-powered KVM transmitter that can be plugged directly into any computer.



including recabling.

However, with the new transmitter, businesses can easily and cost-effectively take advantage of the ADDERLink Infinity solution without this costly step."

product range, and is compatible with the ADDERLink Infinity Manager (A.I.M.) and ADDERLink Infinity receivers.

Ong concludes: "Retrofitting high-performance KVM into environments designed around legacy, outdated equipment is challenging and expensive, sometimes requiring a complete redesign

APB Magazine is available to professionals in the broadcasting and related industries within Asia-Pacific region.

The leading broadcast publication providing you with

# News You Can Use

Available both in Print and e-copy

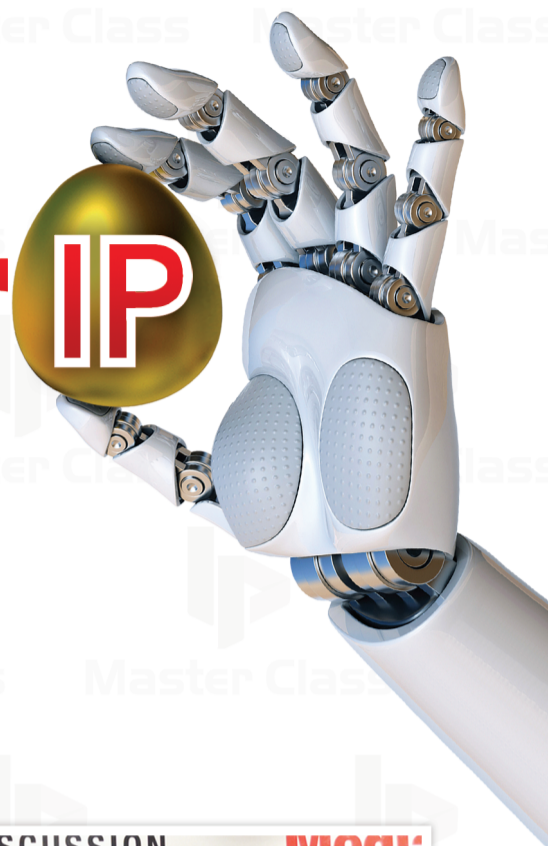
For free subscription, please visit:  
[www.apb-news.com/subscription](http://www.apb-news.com/subscription)





**Master Class**  
AN **APB** SPECIAL EVENT

# Real-time Media over IP inside a TV Facility



25 JUNE 2018 • MARINA MANDARIN SINGAPORE

We would like to thank all industry partners for your support.

# THANK YOU

STAY CONNECTED



APBnews



APB\_News



company/asia-pacific-broadcasting

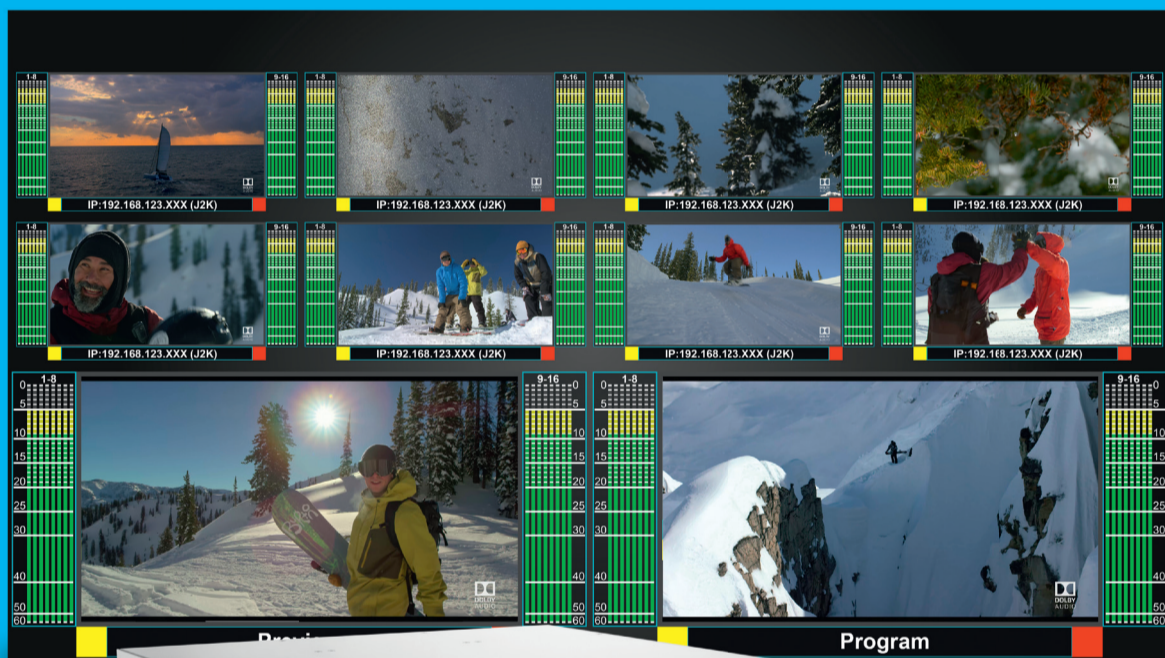
**APB**  
News You Can Use

# Welcome to Broadcast 3.0 Video Infrastructure 3.0



## Rethink

## Multiviewers



World's 1<sup>st</sup>  
Infinitely Expandable  
True IP Multiviewer

Experience the re-definition of multiviewers – with the world's 1st infinitely expandable true IP multiviewer. Complementing Lawo's existing vm\_mv16-4 and vm\_mv24-4 multiviewer line-up, this new virtual module (VM) for Lawo's V\_matrix IP routing & processing platform breaks the mold of conventional multiviewers. Unlimited inputs and heads. Full support of IP and SDI sources in 4K/UHD, 3G, HD and SD. Support of embedded and discrete audio. Pixel perfect mosaics with ultra-low latency. Intuitive drag&drop mosaic configuration with Lawo's "theWALL".



Join us @  
**IBC**  
**#8.B50**

[www.lawo.com](http://www.lawo.com)

SEE MORE.



[bit.ly/vm\\_dmv64-4](http://bit.ly/vm_dmv64-4)