

**ABU  
DIGITAL** **15** *years*  
*2005-2019*  
**BROADCASTING  
SYMPOSIUM 2019**

**DIGITAL TRANSITION  
& TRANSFORMATION**

4-7 MARCH 2019, ROYALE CHULAN KUALA LUMPUR

PRINCIPAL SPONSOR

world **dab**

MAJOR SPONSORS



SUPPORTED BY





# Auto brands with DAB+ digital radio



Find out more : [www.worlddab.org](http://www.worlddab.org)

# MESSAGE FROM THE ABU SECRETARY-GENERAL

I am delighted to welcome you all to the 15th Digital Broadcasting Symposium. I would like to begin by appreciating the invaluable contributions and support from our partners, sponsors and members for making this Symposium possible. Some of them have been with us in the better part of this 15-year journey and we are grateful for their continued support.

The underlying idea and purpose of the DBS, when it was launched in 2005, was to help our members in going digital. I am happy to note that over the past many years the Symposium has carried this notion forward, every year focusing on selected areas or technologies to keep our members informed and up to date with the digital innovations the industry has to offer. The Symposium was initiated as a service to ABU members and has continued to remain the same while developing itself as a regional platform for our members and the industry to gather, learn and evolve with the competition.

This year with the theme “Digital Transition and Transformation”, the DBS is carrying forward the same idea of going digital while focusing on two key areas our members and the broadcasters as a whole are trying to endeavour. One is the move from analogue to digital delivery of the broadcast signal to achieve Analogue Switch-Off (ASO). The other is transformation of the internal workflows and operations by implementing appropriate digital solutions to automate the processes in order to improve the productivity and efficiency. Most of the new and more tech savvy organisations are integrating digital technologies and solutions to effectively transform their operations, streamline their services and automate their workflows and this is necessary to compete with the likes and remain relevant.

We may not realise it but the speed at which the industry is evolving and how fast new and advanced digital solutions are making its way to the market is creating a huge digital gap between the broadcasters. While some are managing to keep abreast with the evolving industry the others are not able to keep up with the pace due to many reasons. This has created a “digital divide” among the broadcasters in the region. This



gap unfortunately keeps increasing every year and many are getting left behind with legacy tech that are difficult to integrate, expensive to maintain and are slowing down and hindering the otherwise easy processes with digital. Broadcasters need to identify these bottlenecks, find appropriate digital solutions and devise effective strategies considering the available resources to completely transform these workflows to digital.

The symposium, through the industry exhibition, conference sessions, panel discussions, workshops and masterclasses, presented by well-known professionals across the globe, will present and showcase effective digital solutions available for broadcasters and media operations of any size and shape. It provides a platform to share experiences on digital transition, technology implementation, workflow automation, enhancing user experience and exploring opportunities the changing media business landscape can provide to broadcasters and media organisations.

This 15th edition of the ABU Digital Broadcasting Symposium will showcase and present wide-ranging technologies and innovative solutions with exciting prospects for the broadcasting and media industry to develop new opportunities, create attractive content and engage global audiences to keep up with the market trends and the evolving industry.

We are pleased to welcome all delegates from across the Asia-Pacific and around the world.

I wish you successful discussions and a productive time during the 15th Digital Broadcasting Symposium.

<b>Contents</b>	<b>02 Sponsors, Exhibitors, Supporters, Media Partners</b>
	<b>10 Masterclasses &amp; Showcases</b>
	<b>12 DBS Workshops Programme</b>
	<b>14 DBS Conference Programme</b>
	<b>20 Speakers</b>
	<b>36 Workshop Sponsors</b>

<b>38 Exhibition Floor Plan</b>
<b>40 Exhibitors</b>
<b>55 Media Partners</b>
<b>56 15 Years of DBS Photo Gallery</b>
<b>60 ABU Engineering Awards 2018</b>
<b>64 Best Booth Award</b>

We extend our appreciation and thanks to the following for their invaluable support

PRINCIPAL SPONSOR



MAJOR SPONSORS



WORKSHOP SPONSORS | SUPPORTING SPONSORS | MEDIA PARTNERS





EXHIBITORS



# Embracing the cloud

## R&S®PRISMON

### The convergent monitoring solution for broadcast and streaming media



In a heterogeneous world of ever growing and fast moving standards, flexibility and cost are winning factors. R&S®PRISMON is designed from the ground up to allow broadcast and media service providers to successfully solve these challenges.

- Multistandard support for unmatched versatility (e.g. AIMS /SMPTE 2110, ASPEN, DASH, ...)
- Future-proof, fully software defined solution for innovative monitoring features
- Cloud-enabled and orchestration-ready design for dynamic and flexible resource allocation

Available on scalable IT hardware platforms and for cloud deployments.

[www.rohde-schwarz.com/ad/prismon](http://www.rohde-schwarz.com/ad/prismon)



## Visit us in ABU2019.

Booth 22 & 23

Rohde & Schwarz Malaysia Sdn. Bhd.  
Email: [support.malaysia@rohde-schwarz.com](mailto:support.malaysia@rohde-schwarz.com)  
Phone: +603-5569 0811





# SONY

## Built to perform under extreme environments

Nothing weathers the elements or time like Sony Optical Disc Archive. More reliable than tape and hard drives, Sony Optical Disc Archive safeguards your precious data and media assets now, and in the future.

100-year rated media life with non-contact read/write technology

Resilient against a wide range of environmental conditions, including water disasters

High speed data retrieval, proxy browse and random access

Extremely low TCO (Total Cost of Ownership),  
Generation migration free archive media with no special storage requirements



For more information,  
please visit

[www.pro.sony](http://www.pro.sony)

Beyond Definition



Optical Disc Archive



Join us at our workshop to learn more  
about digital audio experiences

**Simple Surround Production for  
Enhancing the Immersive Experience**

**GEOFFREY LOW, STAFF CONTENT ENGINEER**

TUESDAY, MARCH 5 | 2 p.m. – 3:30 p.m.

TUN SRI LANANG 1



## Collaborate effectively with Viz One, Vizrt's advanced media asset management system.



Connect all your key systems and allow your teams to work better together with Viz One's open and shared media management.

Meet us at ABU Digital Broadcasting Symposium in Kuala Lumpur  
**March 4th-7th 2019.**



Learn more at [vizrt.com](http://vizrt.com)





## TV STREAMING

Diverse news and entertainment  
TV1, TV2, INews and RTM Parlimen



## RADIO STREAMING

Listening pleasure where ever you are  
Radio Klasik, Nasional FM, Traxx FM, Asyik FM  
Ai FM, Muzik FM, Minnal FM, KLFM, WaiFM and VFM



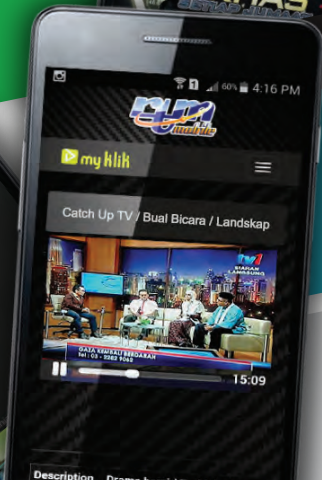
## PROGRAMME GUIDE

Electronic Programme Guide with  
Notification setting.



## MYKLIK MOBILE

Video On Demand / Catch Up TV  
Missed your favourite TV programme?  
Don't worry watch it at MyKlik



myklik



@myklik\_mobile

Available in :





## DAB+ Digital Radio Workshop - understanding the business case

Monday 4 March 2019  
14:00 – 17:00  
Room: Taming Sari 1

### Opening welcome

Joan Warner, Asia Pacific Chair, WorldDAB  
and CEO Commercial Radio Australia

### DAB+ business case studies

- Private broadcaster perspective: Grant Blackley, Southern Cross Austereo
- Public broadcaster perspective: Cath Dwyer, Australian Broadcasting Corporation
- What distribution is best for the business? - The technical business case: Dr Les Sabel

### DAB+ Asia Pacific developments

- Thailand
- Vietnam
- Malaysia

### Panel Session: what broadcasters need to do to ensure their place in the connected dash

- WorldDAB Automotive Group – update on user experience best practice and what the vehicle manufacturers need from broadcasters
- Voice activation – opportunity or threat for radio?
- Why hybrid radio (DAB & IP) makes more sense than just IP
- Metadata and metrics
- How Asia Pacific broadcasters can ensure their future in the connected dash

### International update

- EU Directive on digital terrestrial radio in vehicles
- Progress with Digital Switch Over in Europe
- WorldDAB Asia Pacific Committee
- Latest WorldDAB technical developments

# #DBS2019 MOJO MASTERCLASS WITH VIASEN SOOBRAMONEY

Join multiple award-winning South African journalist and trainer Viasen Soobramoney in our Mobile Journalism (MoJo) Masterclass at #DBS2019 to learn how to create professional videos and engaging digital content with your smartphone that will help you transform the communication workflow of your newsroom.



## What you will learn?

**Mojo Photography** - How to maximize your smartphone's potential when capturing images.

- Users will learn tips and tricks and basic smartphone photography principles.

**Mojo Radio** - The art of broadcast audio using your smartphone.

- Users will learn how to capture audio, radio storytelling, editing and packaging on smartphone.

**Mojo Video** - Shooting, editing and packaging broadcast quality video using your smartphone, includes tips and tricks, live streaming etc.

**Mojo Playbook** - The ultimate guide to tools, apps, tips and tricks when it comes to smartphone content creation.

## Masterclass Schedule

### Tun Sri Lanang 1

• **Monday, 4 March 2019**

09:00 – 17:00

### Mahkota 2

• **Wednesday, 6 March 2019**

09:00 – 17:00

• **Thursday, 7 March 2019**

09:00 – 17:00

# HTC VIVE IMMERSIVE VR SHOWCASE AT #DBS2019

## VR Showcase Schedule

### View @ Chulan

• **Tuesday, 5 March 2019**

Session 1: 14:00 – 15:00

Session 2: 16:00 – 17:00

• **Wednesday, 6 March 2019**

Session 3: 09:00 – 10:00

Session 4: 11:00 – 12:00

Session 5: 14:00 – 15:00

Session 6: 16:00 – 17:00

• **Thursday, 7 March 2019**

Session 7: 11:00 – 12:00

Session 8: 14:00 – 15:00

**Funique**  
Future x Unique



htc

VIVE

Join us for a unique immersive experience showcasing state-of-the-art content creation in the Virtual Reality (VR) domain jointly presented by HTC Vive Malaysia and Funique VR at DBS 2019. The core mission of this immersive experience is to showcase VR as a true form of art to bring an unparalleled experience of storytelling and content creation. There will be 8 showcase sessions delivered over the course of three days. **Thanks to HTC Vive Malaysia, participants will be able to experience the latest 8K high quality content with latest HMDs from HTC Vive.** Each session will last about 50 minutes, showcasing VR experiences chosen by Funique VR Studio followed by Q&A.



# WELCOME TO THE NEW WORLD OF 3D AUDIO FOR TELEVISION!

MPEG-H has been selected as one of the candidate solutions for China's next-gen 3D audio standard, and it has been standardized in ATSC 3.0 and DVB and successfully commercialized in Korea since May 2017.

Visitors have the chance to experience our next generation TV broadcasting audio solution in a private room through Fraunhofer 3D soundbar, where the immersive sound can be experienced from a single and easy to install device.



**Fraunhofer**  
IIS

# MODERN BROADCAST CAMERA SETUP, OPERATION AND TECHNIQUES



This masterclass on broadcast camera setup, operation and techniques will focus mainly on the techniques and knowledge required to operate modern day, industry standard, broadcast quality HD/UHD Camera. It will provide hands on experience with broadcast quality equipment how to setup and effectively use the features of such a camera for different applications. It will also provide up to date information and tutorial on what is the difference between HD and UHD, 4K and 8K, HDR, WCG, modern image sensors, colour temperature adjustments, camera tests and measurements and other feature and settings related to today's state-of-the-art cameras.

# SEND IN THE DRONES!

A drone masterclass.

A not to be missed 90 minutes masterclass on the practical application of drones in the field of video and broadcast production. Conducted by Ming, this workshop will give you a wealth of knowledge on the usage of drones. Topic covered include:

- Drone Basics - Participants will learn the various types of drones and its practical applications.
- Drone Technology - The technology available today in giving you the edge in your professional projects.
- Drone Application - Discusses various conditions that is highly suitable for the application of drones including the latest 360° video capture.
- Drone Handling Basics - Includes handling your drones in a critical or emergency situation.
- Post Production - Give your drone footages extra edge with some tips on some post work and colour grading
- Tips and Tricks - A professional tips and tricks revealed!
- Demo Session - Participants will get some hands-on experience in the basics of controlling a drone.



*\* Schedules are correct at the time of printing. Please refer to programme on site for latest updates.*

## DBS WORKSHOP | Monday, 4 March

## Taming Sari 1

09:00-12:30

**DVB Workshop – Best Video and audio combined with more interactivity – the new DTT**

The workshop will demonstrate the advanced features of UHD like High Dynamic Range (HDR) and Next Generation Audio (NGA). Furthermore, the current level of interactive features based on the HbbTV standard will be demonstrated. This will be complemented by demonstration of DTT transmission planning and testing. Participants will have the opportunity for hands-on, interactive demonstrations.

**DVB-T2 as next generation DTT system**

*Peter Siebert, DVB*

**DVB-T2 SFNs: The importance of Network and Frequency planning**

*Mats Ek, Progira*

**Equipment to set up DVB-T2 SFN networks**

*Colin Prior, Enensys*

**How to test and monitor my terrestrial network**

*Gino Salocchi, Rover / Simon Tsang, TestTree*

**The best TV experience with next generation audio for HD and UHD**

*Jerry Gui, Dolby*

**HbbTV and OTT enhancement for DVB broadcasting**

*Mika Kanerva, Sofia Digital*

**Android TV Capabilities and Features**

*Leon Mun W Y, Sony*

12:30-13:30

**Lunch Break**

13:30-17:00

**WorldDAB DAB+ Digital Radio Workshop – DAB+ - Understanding the Business Case**

**Opening welcome & announcement** - *Joan Warner, Asia Pacific Chair, WorldDAB and CEO Commercial Radio Australia*

**DAB+: Business Case studies** - Moderator: *Joan Warner, CRA*

- Private broadcaster perspective: *Grant Blackley, SCA*
- Public broadcaster perspective: *Cath Dwyer, ABC*
- What distribution is best for the business? - The technical business case: *Dr Les Sabel, WorldDAB Technical Committee*

**Asia Pacific Developments**

Thailand – progress with the DAB+ trial: *Orasri Srirasa, NBTC*

Vietnam – *Do Anh Duc, Centre of Radio and Television Broadcasting, Voice of Vietnam*

**Panel Session: Connected Vehicles – what do broadcasters need to do to ensure their place in the dash**

Moderator: *Steve Ahern, AMT*

- WorldDAB Automotive Group –
  - user experience best practice Vs 3
  - what the vehicle manufacturers need from broadcasters
- Why Hybrid DAB makes more sense than straight IP
- Voice activation – opportunity or threat for radio?
- Metadata and metrics
- How Asia Pacific Broadcasters and vehicle manufacturers can ensure their future in the dash

*Aaron Alphonso, CTO Macquarie Media Limited*

*Nick Piggott, Project Director, RadioDNS*

*Kath Brown and Les Sabel, WorldDAB Automotive User Group*

**International update**

- EU Directive on digital terrestrial radio in vehicles
- Progress with Digital Switch Over in Europe
- WorldDAB Asia Pacific Committee
- Latest WorldDAB technical developments

Speakers: *Bernie O'Neill, Project Director, WorldDAB,*

*Lindsay Cornell, Technical Committee Chair WorldDAB / Principal Architect, BBC*



**DBS WORKSHOP | Tuesday, 5 March**

14:30-16:00	<b>DOLBY Workshop</b> <b>Tun Sri Lanang 1</b> <b>Simple Surround Production for Enhancing the Immersive Experience</b> <i>Mr Geoffrey Low, Staff Content Engineer, Dolby</i>
14:30-16:00	<b>DRM Workshop</b> <b>Tun Sri Lanang 2</b> <b>Introducing the DRM Benefits and Services to Millions - the India Case</b> <i>Mr Yogendra Pal, Honorary Chairman of the DRM Chapter in India, and other senior Consortium members</i>
16:00-16:15	<i>Networking Break</i>
16:15-17:30	<b>DRM Workshop</b> <b>Tun Sri Lanang 2</b> <b>How to Transition from Analogue to Digital Radio – Get the Practical DRM Know-how and Experience</b> <i>Mr Alexander Zink, Senior Business Development Manager, Fraunhofer IIS, Germany and senior Consortium Members</i>

**DBS WORKSHOP | Wednesday, 6 March**

11:30-13:00	<b>ROHDE &amp; SCHWARZ Workshop</b> <b>Tun Sri Lanang 1</b> <b>Video over IP: Optimizing IT technology in broadcast</b> <i>Mr Stephen Wong, Regional Sales Manager, India &amp; South East Asia, Rohde &amp; Schwarz, Singapore</i>
	<b>HPC, leading to Smart Storage</b> <i>Mr Ong Kah Keong, Solution Architect, Broadcast and Media (Asia Pacific), Rohde &amp; Schwarz, Singapore</i>
13:00-14:00	<i>Networking Break</i>
14:00-15:30	<b>DALET Workshop</b> <b>Tun Sri Lanang 1</b> <b>Orchestrated Media Solutions</b> <b>Innovative Media Asset Management and AI Enabled News Operations</b> <i>Mr Laurent Jardin, Project Manager/Solution Architect Dalet Digital Media Systems</i>
15:30-16:00	<i>Networking Break</i>
16:00-17:30	<b>NTT Data Institute of Management Consulting, Inc. Workshop</b> <b>Tun Sri Lanang 1</b> <b>Hybridcast Technical Update</b> <i>Mr Yoshimitsu Tsurimaki, Senior Manager/Social System Innovation, NTT Data Institute of Management Consulting, Inc.</i>

**DBS WORKSHOP | Thursday, 7 March**

09:00-10:30	<b>Whiteways Systems Workshop</b> <b>Tun Sri Lanang 1</b> <b>Modern OB Van Design Concept</b> <i>Mr A Raza, Director, Whiteways Systems</i>
-------------	--

\* Programme details are correct at the time of printing. Please refer to programme on site for latest updates.

## CONFERENCE Day 1 | Tuesday, 5 March

Taming Sari 1

09:00-09:30

**OPENING SESSION****Welcome Note***Dr Javad Mottaghi, Secretary-General, Asia-Pacific Broadcasting Union***Industry Keynote – Seizing the digital opportunity***Ms Joan Warner, Chief Executive Officer, Commercial Radio Australia*

09:30-10:30

**Session 1: Technologies & Standards: New Developments and the Next Wave***Moderator: Mr Hamid Dehghan Nayeri, Chairman ABU Technical Committee, Director, International Technical Affairs & ABU Technical Liaison Officer, Islamic Republic of Iran Broadcasting (IRIB-Iran)***5G and Broadcast***Dr Peter Siebert, Head of Technology, DVB***The launch of 4K/8K Advanced Satellite Broadcasting and Related Technologies and Developments***Mr Akira Kiuchi, Technical Engineer, Engineering Administration Department, NHK-Japan***TV Broadcasting via FeMBMS- the next TV transmission standard?***Mr Mats Ek, Technical Director, PROGIRA***Recent developments in DAB+***Mr Lindsay Cornell, BBC and WorldDAB Technical Committee Chair*

10:30-11:00

Networking Break

11:00-11:30

**Ministerial Session****Welcome Address***Dr Javad Mottaghi, Secretary-General, Asia-Pacific Broadcasting Union***Ministerial Address***YB Tuan Gobind Singh Deo, Minister of Communications and Multimedia, Ministry of Communications and Multimedia, Malaysia*

11:30-11:45

**Official Opening of Exhibition**

11:45-13:30

**Session 2: Broadcasting Business and Strategies for the Future***Moderator: Mr Asaad Bagharib, Director, Thinking Tub Media Pte Ltd***Session****Sponsored  
by Dolby****Next Generation Experiences in our Region***Name, Designation, Dolby***Commercial Broadcasting now and into the future - opportunities and challenges***Mr Grant Blackley, CEO Southern Cross Austereo***DAB v Analogue – Why incumbents can be the winners***Mr Nick Piggott, Project Director, RadioDNS***OTT Services - Increase the Value of your Content at a Lower Operating Cost***Mr Fabio Gattari, Director, Etere***Maximising audiences through multi-platform delivery***Mr Markus Fritz, EVP Commercial Development, Eutelsat***(Topic TBC)***Mr Dennis Breckenridge, Managing Director, Elevate Broadcast***DOLBY**

13:30-14:30

Lunch

14:30-15:30	<p><b>Session 3: Cybersecurity and Media – Action Required</b> Moderator: <i>Mr Masakazu Iwaki, Deputy Director / Head of Secretariat for AI Promotion, Science and Technology Research Laboratories, NHK-Japan</i></p> <p><b>WBU-TC Recommendations on Cybersecurity for Media</b> <i>Mr Kenichi Murayama, Senior Research Engineer, Advanced Transmission Systems Research Division, Science &amp; Technology Research Laboratories, NHK-Japan</i></p> <p><b>Media and cybersecurity - understanding upstream and downstream dependencies</b> <i>Ms Kathryn Brown, Head of Strategic Development, Commercial Radio Australia</i></p> <p><b>Digital Piracy Co-regulations</b> <i>Mr Syed Mokhsien b. Syed Mansor, Head of New Media Management Department, Malaysian Communications and Multimedia Commission (MCMC)</i></p> <p><b>Cybersecurity Framework in Malaysia &amp; Singapore</b> <i>Ms Mariette Peters-Goh, Associate Director: Knowledge, Innovation &amp; Technology, WongPartnership LLP, Singapore</i></p>
15:30-16:00	Networking Break
16:00-17:30	<p><b>Session 4: Big Data, Artificial Intelligence and Personalisation of Media</b> Moderator: <i>Mr A Raza, Director, Whiteways Systems</i></p> <p><b>Radio's super pilot</b> <i>Ms Deb Hishon, Head of Media Measurement, GfK</i></p> <p><b>Technologies for TV Program Production Using AI</b> <i>Mr Masakazu Iwaki, Deputy Director / Head of Secretariat for AI Promotion, Science and Technology Research Laboratories, NHK-Japan</i></p> <p><b>Powering Data-Driven Cloud-Based Digital TV – An Antithesis?</b> <i>Mr Asaad Bagharib, Director, Thinking Tub Media Pte Ltd</i></p> <p><b>Media Data Capital – Increase Your Value</b> <i>Mr Charles Seviar, CTO (APJ + GC) Unstructured Data Solutions, Dell EMC</i></p>

## CONFERENCE Day 2 | Wednesday, 6 March

Taming Sari 1

09:00-10:30 **Session 5: Migrating to IP – Standards, Strategies and Challenges**Moderator: *Dr Fintan Mc Kiernan, CEO, Ideal Systems SEA***Optimizing IT Technology in Broadcast***Mr Yew-jin Cheong, Director, Broadcast & Media, Rohde & Schwarz***Implementation of IP for DTT distribution network in SFN***Mr Toshihiro Mitsuyoshi, Engineering Administration Department, NHK-Japan***Leveraging IP WAN technology for contribution and remote production***Mr Torkel Aamodt Thoresen, Senior Solution Architect, Nevion***The road to IP workflow, why? And is this the time right for you?***Mr Peter Bruce, Director IABM APAC, IABM***Migrating to IP? Reality Check: Manage the Diversity of IP enabled products, SDN orchestration and monitoring***Mr Jonathan Triboulet, Director APAC Operations, Skyline Communications*10:30-11:10 **Networking Break**11:30-13:00 **Session 6: Digital Transformation – Workflow Enhancement, Media Management and Cloud Integration**Moderator: *Mr Charles Sevier, CTO (APJ + GC) Unstructured Data Solutions, Dell EMC***Session****Sponsored  
by Vizrt****One platform – leveraging MAM as a platform to reduce complexity***Mr Paul Shutt, Director of Solutions, APAC, VIZRT***Integrating DAB+ into contemporary studio technology***Mr Aaron Alphonso, CTO, Macquarie Media Limited***OTT & Broadcasting: streamline your operations and manage the big picture with WHAT'S'ON***Mr Johan Vanmarcke, Managing Director MEDIAGENIX APAC***Enhanced workflow for HD and UHD production in today's broadcasters***Mr Tomas Chen, Assistant Manager, Sony***Make your audiovisual archives valuable again***Mr Bruno Burtre, Director of Business Development, NOA-Archive, NOA GmbH***Cloud Integration- "Getting to cloud via Hybrid"***Mr James Taylor, Head of Cloud Services for APAC, Ideal Systems*13:00-14:00 **Lunch**

**14:00-15:30 Session 7: Delivery Technologies for the Future – UHD, 5G and more**

Moderator: *Dr Peter Siebert, Head of Technology, DVB*

**8K UHD TV Video Transmission System with Adaptive Rate Control for Mobile Live Production**

*Mr Fumiki UZAWA, Engineer, NHK-Japan*

**The Value of Terrestrial Network Planning for Broadcast Technologies in 5G Networks**

*Mr Andreas Streit, Senior Consultant & Radio Network Planner, LS telcom*

**Introduction of terrestrial UHD broadcasting networks in Korea**

*Mr Jae Kwon LEE, Senior Researcher, Research & Planning Department, KBS TRI, Korean Broadcasting System*

**“DAB and 5G, What are the opportunities and challenges”**

*Dr Les Sabel, WorldDAB Technical Committee*

**Optimizing TV Distribution combining DTT/DTH broadcast and OTT**

*Mr Colin Prior, APAC Sales Manager & Mr Simon Tsang, Area Sales Manager, ENENSYS Technologies*

**15:30-16:00 Networking Break****16:00-17:30 Session 8: Advances in Digital Radio & TV Technologies**

Moderator: *Ms Bernie O'Neill, Project Director, WorldDAB*

**22.2 Multichannel Sound Production System for 8K UHD TV Program**

*Mrs Taeko Hattori, Engineer, NHK-Japan*

**China Broadcasting: Past, Now and Future**

*Dr Kong Bin, Vice-Chairman of ABU TC/Operation Director, National Radio & Television Administration, NRTA- People's Republic of China*

**Introduction of UHD workflow and content management system in KBS**

*Mr Jun Ho CHO, Senior Engineer, System Construction Department, Korean Broadcasting System*

**Required performance for new generation 4K Master Monitor**

*Mr Sota Kobayashi, Engineer, IKEGAMI*

**Network Management Systems (NMS) in Broadcasting Chain**

*Mrs Rezvaneh Sahba, Manager of Central Monitoring, IRIB-Iran*

**DRM Emergency Warning Functionality – Saving Lives by Integrating DRM into your National Warning Infrastructure**

*Mr Alexander Zink, Senior Business Development Manager, Digital Radio & Streaming Applications, Fraunhofer IIS*



## CONFERENCE Day 3 | Thursday, 7 March

Taming Sari 1

09:00-10:30 **Session 9: Immersive Technologies and Industry Trends in VR, AR, MR, 360Video and more...**Moderator: *Name, Designation, Organisation (TBC)***Keydream – A real-time virtual studio with no chroma keying***Mr Atsunori Toyoda, Engineer, NHK-Japan***Immersive and Interactive Audio***Mr Toni Fiedler, General Manager, Fraunhofer IIS, Greater China & APAC***Between Flatty and Spatial: Where Cinematic VR moves forward***Mr Jong Min Kim, New Media Content Creator, VR***Veritable Video Codec (VVC) for UHD and 360 Video***Dr Mohieddin Moradi, R & D Project Manager, IRIB R&D Department, IRIB-Iran***(Topic TBC)***Name, Designation, Organisation*10:30-11:00 *Networking Break*11:00-11:15 **ABU General Assembly 2019 | Host Presentation, NHK-Japan***Mr Akira Negishi, Senior Manager, NHK World Department, NHK-Japan Corporation*11:15-13:00 **Session 10: Industry Debate Panel: Broadcasters & the Connected Generation – Content ideas, Business cases and Serving a Global Audience**Moderator: *Mr Akira Negishi, Senior Manager, NHK World Department, NHK-Japan**Tuan Haji Abdul Muis bin Shefi, Director General, Radio Televisyen Malaysia**Ms Hong, Young Kyung, ABU Technical Liaison Officer, Production Technology Management Department, KBS-Korea**Mr Garry Kum, Head of Engineering & ABU Technical Liaison Officer, Television Broadcasts Limited (TVB-Hong Kong)**Mr Lindsay Cornell, BBC and WorldDAB Technical Committee Chair*13:00-14:00 *Lunch*

14:00-15:30 **Session 11: OTT, IBB and Content Delivery Platforms for Building a Global Audience**  
Moderator: *Dr Ahmad Zaki Mohd Salleh, Group General Manager, Engineering, Media Prima Berhad*

**Reliable Video Distribution over the public Internet**

*Mr Oliver Linow, Distribution Systems, Deutsche Welle*

**Latest developments in Hbbtv**

*Mr Mika Kanerva, COO, Sofia Digital*

**Cloud Broadcast – The Next Technology Wave “Why Cloud is important for Broadcasters”**

*Mr James Taylor, Head of Cloud Services for APAC, Ideal Systems*

**Leveraging Weather for Broadcast and Online Viewership**

*Mr Tom Sutherland, General Manager – Asia, MetraWeather*

**Where we stand Japanese IBB Service “Hybridcast”**

*Mr Yoshimitsu Tsurimaki, Senior Manager/Social System Innovation, NTT Data Institute of Management Consulting, Inc.*

15:30-16:00 **Networking Break**

16:00-17:15 **Session 12: Digital Transition and Analogue Switch-off – Challenges, Case Studies and Experiences**  
Moderator: *Mr Alex Reza Shariman Othman, Director of Public Relations, Radio Televisyen Malaysia*

**DSO (Digital Switch Over): Lessons from recent projects in Asia and elsewhere**

*Dr Helge Stephansen, Sr. Solutions Architect, Nevion*

**ITU assistance in the DSO**

*Mrs Ilham GHAZI, Head, Broadcasting Division, Radiocommunication Bureau, International Telecommunication Union*

**Learning from the Experiences of DSO in Norway**

*Ms Bernie O’Neill, Project Director, WorldDAB*

**Transition to DRM Digital Radio in India – Approach and Lessons Learnt**

*Mr Yogendra Pal, Honorary Chairman of the DRM Chapter in India, and other senior Consortium members*

**my Freeview Digital**

*Name, Designation, MCMC*

# SPEAKERS



## **Javad Mottaghi, Secretary-General, ABU**

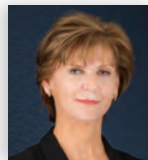
Dr Javad Mottaghi assumed the office of Secretary-General of the Asia-Pacific Broadcasting Union (ABU) in May 2010. Before joining the ABU, he was Director of the Asia-Pacific Institute for Broadcasting

Development (AIBD) for 12 years. He possesses 37 years of experience in media/communication, international partnership facilitation, media development, in ICT utilization, capacity building, networking, research, negotiations, fund raising, news and programming for radio and television, social and cultural television programme production and sports coverage.

Dr Mottaghi was awarded the Elizabeth R Award for Exceptional Contribution to Public Service Broadcasting and received a "Special Lifetime Achievement Award" in May 2010 in recognition of his contributions to the Asia – Pacific Institute for Broadcasting Development (AIBD);

His past roles include: Vice Minister of the Sports for Sports & Federations (1989-1992), Deputy to President of the National Olympic Committee of Iran in International Affairs, until 1979, Chairman of the Technical Swimming Committee for the Asia Amateur Swimming Federation, (1980-1981) and Secretary-General of the Iranian Swimming Federation (1982-1998).

He holds a Ph.D. from the University of Teesside in England and a Bachelor's degree in Mechanical Engineering from Tehran Sharif University of Technology.



## **Joan Warner, Chief Executive Officer, Commercial Radio Australia**

Joan Warner is the Chief Executive Officer of Commercial Radio Australia which represents 99% of all commercial radio broadcasters. Ms Warner was responsible for the planning, rollout and implementation of DAB+ digital radio in the five metropolitan capitals covering up to 60% of the Australian population and continues the DAB+ implementation for commercial radio broadcasters across regional Australia.

In her role as CEO she also oversees the whole of industry marketing campaign, Radio Codes of Practice, audience survey contracts and industry copyright agreements. Ms Warner is responsible for the annual National Commercial Radio Conference, Siren Creative Awards and Australian Commercial Radio Awards.

Ms Warner has worked at senior executive levels in the private and government sectors and holds four degrees including a Master of Business Administration and a Master of Education.



## **Bernie O'Neill, Project Director, WorldDAB**

Bernie O'Neill leads the WorldDAB Project team to deliver a wide range of industry events, briefings and market intelligence that provide insight, analysis and best practice on all aspects of the rollout of DAB digital radio. Working with WorldDAB's 94 members across 25 countries, every year her team delivers over 20 tailored workshops, seminars and advice across all aspects of the switch from analogue to broadcast digital radio. This includes regulation, licensing, technology trials, network buildout, marketing and production of digital radio content. Bernie has a degree in business, a background in international industry forum management and has worked in the digital radio sector for WorldDAB since 2011.



**Abdul Muis Shefi**  
**Director General, RTM-Malaysia**

Mr Abdul Muis Shefi has been Director General of Radio Televisyen Malaysia since January 2019. He has worked for Malaysia's national broadcaster for more than 35 years. Before taking up his present position, he was Deputy Director General of Strategic Broadcasting, a post he held from August 2017.

Mr Muis is no stranger to broadcasting, news reporting and the ABU. His forte has been news and current affairs. He began his career at RTM in 1983 as a journalist, and later managed several units in the news department, including a stint as the State Director of Broadcasting in his home state, Terengganu.

He holds a Master's degree in Corporate Communication. He attended international fellowship programmes at Wolfson College in Cambridge, UK, and at CNN in Atlanta, Georgia, US.

Mr Muis previously held the position of Chairman of the ABU News Group, as well as membership of other institutions like BERNAMA, ISWAMI and the Malaysian Press Institute. He lectures at local universities and agencies on journalism and is a lifetime member of Chevening Scholars Alumni and Universiti Putra Malaysia (UPM) Alumni.

Mr Muis has presented papers at various international conferences on issues relating to journalism, ranging from politics to disaster management.



**Alex Reza Shariman Othman, Director of Public Relations, Radio Televisyen Malaysia (RTM)**

A graduate of MARA Institute of Technology, Alex's first degree was in the field of Mass Communication, majoring in broadcasting. In his experience of more than 20 years in the broadcasting field at RTM, Alex has performed extensive duties in television production, channel branding, public and international relations. Representing RTM at international conferences and meetings abroad, he also led several successful cooperation programmes, festivals and productions to fruition. He received his Master in Integrated Marketing and is currently pursuing a doctorate in Consumer Psychology, focusing on tourism.



**Jong Min Kim, New Media Content Creator**

Jong Min Kim is the CEO of Grabit, a New Media Production Company based in South Korea. His portfolio includes Producer and Immersive Content Planner, Producer at UYU Media Lab, CEO of Content Planning Company, Xmeter, and VR Programmer at Bucheon International Fantastic Film Festival (BIFAN). He is one of the best known VR programmers in Korea and has been advising the South Korean government on various topics regarding VR content creation. He has also produced several award-winning VR content that were selected by major film festivals.



**Kathryn Brown, Strategic Development, Commercial Radio Australia**

Digital Radio Project Manager, Kath Brown works with Commercial Radio Australia's digital technical advisory committee to further develop the DAB+ platform. She works with regional broadcasters and the regional digital working group to implement trials and develop the costing and technical framework for regional roll out in Australia. Kath works closely with retailers, manufacturers, the automotive industry and mobile phone manufacturers.



**Les Sabel, Founder, S-Comm Technologies**

Les has over 30 years of experience in communications systems, including broadcast digital radio (DAB/DAB+/DMB and DRM), mobile communications, wireless broadband and satellite communications. Les founded S-Comm Technologies Pty. Ltd. in 2008 to work with the radio industry on DAB+ digital radio. S-Comm has provided services to many Australian and international companies and currently provides on-going independent engineering consultancy to Commercial Radio Australia, WorldDMB, the ITU, the ABC and SBS, and various commercial radio networks and regulators in Australia and South East Asia.



**Akira Kiuchi, Technical Engineer, Engineering Administration Department, Japan Broadcasting Corporation, NHK-Japan**

Akira Kiuchi is System Engineer for 4K/8K broadcasting in the Engineering Administration Department of Japan's public broadcaster, NHK. He joined NHK in 2006 and until 2017 was Technical Engineer for broadcast playout systems in its Broadcasting Engineering Department. From 2006 to 2012 Mr Kiuchi worked as a Broadcast Engineer at NHK's Hiroshima Station. He holds a Master of Electrical and Electronic Engineering at Tokyo University of Agriculture and Technology.



**Hamid Dehghan Nayeri, Chairman of ABU Technical Committee, Director, International Technical Affairs, IRIB**

Hamid Dehghan Nayeri is Director of International Technical Affairs at Islamic Republic of Iran Broadcasting (IRIB). He is also Chairman of the ABU Technical Committee, a post he took up in 2018. Mr Nayeri's specialty is spectrum management. His experience in broadcast technology includes planning and developing transmitters, installation and commissioning of SW transmitters and antennas, and planning of MW and SW stations. Mr Nayeri is actively involved in ITU activities as well as cooperating closely with the European Broadcasting Union's Technical Committee. He was Vice Chairman of the ABU Technical Committee for four years from 2013 to 2016 and was also the Panel Chairman of the ABU Engineering Excellence Awards.



**Masakazu Iwaki, Deputy Director/Head of Secretariat for AI promotion of Science & Technology Research Laboratories (STRL), NHK-Japan**

Masakazu Iwaki was appointed Deputy director of Science & Technology Research Laboratories (STRL), NHK in June 2018. He is also Head of Secretariat for AI promotion, STRL, NHK. During his tenure, he will supervise to introduce AI technologies to broadcasting industry. Prior to his current appointment, Iwaki was Head of the Human Interface Research Division in STRL and controlled research and development of human interface technologies to improve media accessibility from 2015 to 2017. He was the chairman of the ABU (Asia-Pacific Broadcasting Union) Technical Committee from 2014 to 2018. Iwaki joined NHK in 1990. From 1994 to 2008, he worked as a research engineer of acoustics in the STRL. He is a member of the Institute of Electronics, Information and Communication Engineers (IEICE), The Institute of Image Information and Television Engineers, Audio Engineering Society (AES), Acoustical Society of Japan (ASJ).





**Toni Fiedler, General Manager, Fraunhofer IIS, Greater China & APAC**

Toni Fiedler is the General Manager of Fraunhofer IIS Greater China & APAC. His career includes several senior business development roles in Fraunhofer IIS, Dolby and Coding Technologies. Prior to these, he co-founded one of the first DVD pre-mastering facilities in Europe in 1996, after seven years as a Tonmeister and Product Manager with Sony Music Entertainment. Toni holds master degrees in sound design and music production from the University of Detmold, Germany and, in economics from the University of Lueneburg, Germany.



**Mats Ek, Technical Director, PROGIRA**

Mats holds a M.Sc.EE (Electronic Engineering) in 1986 from the Royal Institute of Technology (KTH) in Stockholm, Sweden. He has been active in the broadcast industry since 1990, starting with the standardization of T-DAB. From 1991 he has primarily worked in the area of Network and Frequency planning and design of planning software. He has worked with most of digital broadcast standards such as T-DAB, DVB-T/T2, ISDB-T and now also ATSC 3.0. Mats is one of the founders of PROGIRA®. Mats has actively taken part in number of international working groups within EBU, CEPT and ITU-R.



**Kenichi Murayama, Senior Research Engineer, Advanced Transmission Systems Research Division, Science & Technology Research Laboratories NHK, Japan Broadcasting Corporation**

Kenichi Murayama joined NHK (Japan Broadcasting Corporation) in 2002. From 2002 to 2008, he had worked at the NHK Engineering Administration Department / Transmission & Audience Reception Engineering Center. From 2008, he has worked at the Advanced Transmission Systems Research Division in NHK Science and Technology Research Laboratories (STRL) and has been engaged in research and development related to next generation of digital terrestrial broadcasting.



**Fabio Gattari, Director, Etere**

Fabio Gattari is the Director of Etere, which he founded in 1987. Fabio is qualified as a Software Analyst and Systems Planner with over three decades of professional experience in the industry. At its beginning, Etere was the one of the first companies to produce TV and Radio software for scheduling and automation, the software was a revolutionary solution that has allowed Etere to lead the market. The innovative spirit of Fabio in conjunction with his experience has led the company to become a trusted brand and worldwide leader in the broadcast industry in just 25 years.



**Oliver Linow, Distribution Systems Department, Deutsche Welle, Bonn**

Oliver Linow joined Deutsche Welle in 1998. In the following years he established DW's worldwide satellite monitoring system for which he developed tailor-made features such as feedback channels using Internet streaming technologies as well as a network management system. In 2006 he transferred to DW's Transmission Department in Bonn, where he is in charge of planning and developing monitoring solutions for all DW's distribution feeds. In 2009 he introduced StreamMon, an in-house development designed for monitoring DW's live Internet streaming. Since 2018 he has been Deputy Head of Distribution Systems Department.



**Dennis Breckenridge, Managing Director, Elevate Broadcast**

With more than 25 years in the industry, Dennis Breckenridge is known for creating customized solutions for customers. Broadcast facility upgrades, OB trucks to ground up facilities, there is no project too complex. Dennis has integrated projects for universities, governments and corporate institutions. Dennis was also producer for the Myanmar SEA Games opening and closing ceremonies.



**Toshihiro Mitsuyoshi, Engineering Administration Department, Japan Broadcasting Corporation, NHK-Japan**

Mr Toshihiro Mitsuyoshi joined NHK (Japan Broadcasting Corporation) in 2004.

From 2004 to 2015, he worked at the NHK Hiroshima and Matsue Broadcasting Station. From 2016, he worked at the NHK Engineering Administration Department/Transmission & Reception Engineering Center and has been engaged in the improvement of the digital terrestrial television network and the radio broadcasting network.



**Taeko Hattori, Engineer, Japan Broadcasting Corporation, NHK-Japan**

Taeko Hattori has worked for NHK (Japan Broadcasting Corporation) since 2001.

Her current post is in the Production Engineering Division following some years of work in the studio operation and video editing divisions. She is in charge of designing and developing production facilities at her current affiliation and is currently focused on constructing audio studios and audio equipment. This presentation details her first work on the 22.2 multichannel audio studio.



**Fumiki UZAWA, Engineer, Japan Broadcasting Corporation, NHK-Japan**

Fumiki Uzawa joined NHK (Japan Broadcasting Corporation) in 2004, and NHK STRL (Science & Technology Research Laboratories) in 2009. He has

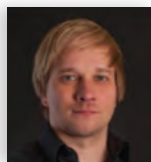
worked on Advanced Transmission Systems Research Division in the NHK STRL. His current research topic is wireless transmission of video material using adaptive transmission control system.



**Atsunori Toyoda, Engineer, Japan Broadcasting Corporation, NHK-Japan**

Atsunori Toyoda was born in Hyogo, Japan, in 1992. He received B.S. degrees in information Technology from The University of Electro-Communications,

Japan, in 2016. Since 2016, he has been working as a video engineer for Matsue station of Japan Broadcasting Corporation (NHK).



**Mika Kanerva, COO, Sofia Digital**

Mr Mika Kanerva has 20 years of experience in Digital Television and special knowledge about DVB broadcasting technologies and creation of added-value services for television. He has unique global experience

about digitalization of the TV, development of new TV / OTT services and delivering solutions for HbbTV and Smart TV environment. Mr Kanerva has been closely involved in TV standards development and industry collaboration especially at Nordic region, Europe and South-East Asia where he provided insight for the television digitalization process from analog TV switch-off to DVB-T2 and Connected TV services launch based to well-known industry standards. He graduated in 2008 as Master of Computer Science at the University of Tampere, Finland. He has been one of the founders and key persons in Sofia Digital since 2000 and currently working in the company as Chief Operating Officer.



**Ilham GHAZI, Head, Broadcasting Division, Radiocommunication Bureau, International Telecommunication Union**

Head of the broadcasting Division in the Radiocommunication of ITU.

Radiocommunication Engineer and MBA. 22 years of experience in spectrum management issues (9 years in regulatory agency of Morocco and 13 years in ITU), including frequency assignment, planning, international coordination and monitoring aspects.



**Helge Stephansen, Sr. Solutions Architect, Nevion**

Dr Helge Stephansen is currently senior solutions architect in Nevion for Digital Terrestrial Broadcasting. Previously, Helge was CTO in T-VIPS, and having held senior technical positions in Telenor Research, TANDBERG Television, and Ericsson. In his 35-year career in broadcasting, he has been involved in a wide area of television transmission technologies ranging from twisted pairs, fibre and satellite using technologies as VSB, D2-MAC, MPEG-2, JPEG2000 and IP. Helge has been an active member of MPEG, DVB, VSF and SMPTE standardisation groups. Helge holds a Phd. in Engineering degree from Norwegian University of Science and Technology.



**Akira Negishi, Senior Manager, NHK WORLD Department, Japan Broadcasting Corporation, NHK-Japan**

Akira Negishi joined NHK in 1995 and has been engaged in the field of HDTV transmission, both domestically and internationally. In 2011, he joined JIB (Japan International Broadcasting) and was in charge of expanding the distribution market of NHK's international television channel, NHK World TV. He rejoined NHK in 2015.



**Aale Raza, Director, Whiteways Systems Pte Ltd**

Aale joined Benchmark in 1999 and rose to become a Director and Vice President of Benchmark Broadcast Systems (S) Pte Ltd. In 2011, Aale founded Whiteways Systems Pte Ltd, Singapore. Whiteways is a leading supplier and systems integration company focused on providing solutions to broadcast houses, Television channels, professional video production / post production and Teleports.



**Andreas Streit, Senior Consultant & Radio Network Planner, LS telcom**

Andreas Streit (Dipl.-Ing.) is working as a senior consultant and radio network planner in the broadcast services department at LS telcom since more than 17 years. He is an expert for broadcast planning tasks and spectrum consultant. As highly motivated, well-educated specialist in the area of broadcast communication Andreas carried out a number of national and international studies and planning projects worldwide for customers within the broadcast sector. Furthermore, he developed together with other experts the training sessions for analog and digital broadcast. Training participants can benefit during the training sessions from his great expert knowledge.



**Peter Siebert, Head of Technology, DVB Project Office**

Dr Peter Siebert received his M.Sc. degree in 1984 and his Ph.D. degree in 1989 in physics from the University in Frankfurt, Germany. In addition he holds a degree in economics from the University in Hagen, Germany and an MBA from the Open University Milton Keynes, UK.

Since May 2009 he is with the DVB Project Office in Geneva, where he is responsible for all technology related aspects of the DVB organization. Before this he has been with Philips Kommunikations AG (PKI AG) in Nürnberg/Germany, SES-ASTRA in Luxembourg and Siemens Schweiz AG in Zürich/Switzerland. In his professional career he has been working on all aspects of audio-video transmission such as video transmission over telecommunication networks (PDH/SDH), satellite and IPTV networks. He has been responsible for a number of ETSI specifications in the area of satellite transmission as well as for DVB standards. He holds several patents for various aspects of audiovisual data transmission.



**Fintan Mc Kiernan, CEO, Ideal Systems SEA**

Fintan joined Ideal Systems Group in 2011 to establish Ideal Systems in South East Asia. Now with offices in Kuala Lumpur, Singapore and Jakarta, Ideal have built broadcast studios, facilities and systems for leading broadcast operators including Sony Pictures, Fox Sports, Astro, Globecast, Encompass Digital Media, CNN Indonesia and SingTel. Fintan is a member of the Asia-Pacific Broadcasting Union's Engineering Excellence Awards panel of judges and is a member of the Board of Advisors for Asia Image Magazine. Prior to joining Ideal, Fintan established OmniBus Systems in APAC (Now Belden GV) and has worked in broadcast technology roles in the US and Europe. Fintan is a regular contributor and speaker at broadcast industry events in Asia including SMPTE, ABU and Broadcast Asia.



**Viasen Soobramoney, National Editor: Live News**

Viasen Soobramoney is a multiple award-winning journalist and trainer based in Cape Town, South Africa. He specialises in the areas of digital convergence and multimedia strategy. He is the founder of Africa's first Mobile Journalism newsroom and a vastly experienced media trainer.



**Lindsay Cornell, Principal Systems Architect, BBC Digital and WorldDAB Technical Committee Chairman**

Lindsay has worked for the BBC for more than 20 years, in a variety of engineering, editorial and leadership roles spanning radio, TV, and spectrum regulation. He has considerable experience of leading collaborative projects through his roles as Chairman of CEPT FM PT51, dealing with spectrum issues for programme making, and as Chairman of the WorldDAB and DRM Technical Committees, managing the stability and development of the respective standards.



**Leon Mun, W.Y., Head of OTT Department, Sony R&D Centre, Malaysia**

Leon Mun is the Head of OTT Department at Sony R&D Centre Malaysia. He currently leads the APAC software roadmap, device certifications and new app launches for Sony Bravia TVs. This gives him a unique TV manufacturer's perspective on customer device capabilities and from-the-field customer feedback which shapes his views. His qualifications include a PhD in broadcast IC design and a BEng(Hons) in Electronics & Computing from Nottingham, UK.



**Colin Prior, Asia Pacific Sales Manager, Enensys Technologies**

Colin joined Enensys in 2012 and is responsible for sales and business development of Enensys products throughout the Asia-Pacific region. He is based in Thailand and is assisting many broadcasters and operators with their deployment of DVB-T2 / SFN transmission networks. Before Enensys, Colin held numerous positions in Thorn Lighting, Aregon International, Bishopsgate Systems, VG Broadcast, Eyretel Limited, SysMedia and Strategy & Technology Limited (S&T).



**Simon Tsang, Asia Pacific Sales Manager, Test-Tree c/o Enensys Technologies**

Simon joined Test-Tree, which specialise in providing Digital Radio/TV Test and Monitoring Solution, in 2016. He is based in Hong Kong and is responsible for the sales and business development of Test-Tree's products in Asia-Pacific region. He has been working in digital TV industry for more than 16 years. In 2000, he worked for DVN Limited in Hong Kong as a Vice President of Sales. Afterwards, he joined a US company named Tut Systems as Regional Sales Director – Asia Pacific.





**Markus FRITZ, EVP Commercial Development, Eutelsat**

Markus is Executive Vice President of Commercial Development at Eutelsat. He is responsible for developing breakthrough customer and business relationships, and building and facilitating strategic mid and long-term Go-to-Market and Product Partnerships. The aim of Go-to-Market Partnerships is to increase the number of sales partners and resellers both regionally and globally, improve end-to-end connectivity, and potentially reduce cost of sales and customer service. These partnerships include collaborations with relevant customer and industry associations. The primary focus of Product Partnerships is to build Eutelsat's end-to-end connectivity solutions, working with market leaders across the delivery chain and business vertical ecosystem. Markus also leads Eutelsat's global marketing communications. With over 20 years international experience in various leading positions in the satellite, ICT and consumer electronics industries, he is a leading expert in the global digital broadcasting business and its dynamics.



**James Taylor, Head of Cloud Solutions, Ideal Systems.**

After completing a degree in Audio Systems Design, James joined Miranda Technologies in London and Hong Kong, (now part of GV Belden) as an engineer. James then moved to GlobeCast in where he was a solution architect based in Hong Kong. After completing several major refresh projects for GlobeCast he moved to Turner Broadcasting as Director of Technology for Asia Pacific where he oversaw the migration and 'cloudification' of Turners playout operations. James' unique pedigree (having worked in Vendor R&D, Broadcast Services and at a multi-channel operator) and track record of architecting highly efficient, highly resilient solutions that spanned multiple technical domains from baseband, file based and cloud, made him a natural fit for Ideal Systems where he currently heads Ideal's cloud/next gen focused department, Ideal Media Works.



**Johan Vanmarcke, Managing Director, MEDIAGENIX APAC**

Johan is the Managing Director of MEDIAGENIX APAC. Johan has a strong consulting background through his 17 years at Capgemini with Telco, Media & Entertainment being one of the key sectors. Hence, Johan is focused on bringing value to M&E companies, which includes being a sparring partner in areas such as new business models, operational (process) improvement and content life cycle management for linear and OTT. His passion is aligned with MEDIAGENIX as its WHAT'S'ON solution enables linear and OTT content providers to optimally run and develop their business. Johan holds Master's Degrees in Engineering and Business Administration.



**Bruno Burtre, Director of Business Development, NOA-Archive**

Bruno Burtre, Director of Business Development at NOA-Archive, was previously Executive Director for the Education, Research and Training Department at INA. He has a technical and audiovisual background and has developed a deep know-how in audiovisual production and archiving. He had a long and distinguished international career at Sony Europe where he, in 2002, set up the first massive migration of audiovisual archives and developed innovative ways of preserving magnetic tapes. His collaboration with NOA Archive started then, in 2005, with the launch of a digital multi-thread audio channel using our NOARecord system. In 2009 Bruno was appointed Sales Director of Vectracom, an audiovisual laboratory specialized in the restoration and digitization of archives, contributing to the growth of the commercial and financial activity of the company while setting up the ISO 9001 Quality process.



**Mohieddin Moradi, IRIB R&D Department**

Dr Mohieddin Moradi has been working as a video engineer at IRIB since 2001. His specialties include digital broadcasting and design studio systems. He is also taught in the field of image and image processing, video coding and broadcast systems at the IRIB University. He is responsible for the design and manufacture of audio and video equipment in the IRIB research and development department. He is also in the field of artificial intelligence, fuzzy systems and soft computing, UHD TV and HDR.



**Gino Salocchi, Director of Sales, Rover Instruments S.p.A.**

BBorn in Florence, has spent his youth in Italy, United States of America and Perú. Achieves a scientific baccalaureate at Saint Mary School in Lima (Peru), graduates in Electronic Engineering and specializes in electromagnetic technologies at the University of Florence (Italy). Obtains a license to practice in Engineering at the University of Padua (Italy). During his career attends several courses of technical and management nature. Begins his technical career in 1983 at GTE Telecommunications in Milan and moves to the GTE Research and Development laboratories in Phoenix Arizona (USA), his job was software designer. Returns to Italy working with Siemens Telecommunications in Milan appointed as Site Supervisor for all the public digital telephone switches installed in the Italian territory. In 1990 moves to Rover Laboratories in Sirmione (Italy) as a Software Manager. Shortly thereafter he becomes the Marketing and Sales Director which is the position occupied up to this date.



**Yew-jin Cheong, Director, Broadcast & Media, Rohde & Schwarz**

Yew-jin joined Rohde & Schwarz in 2017, leading its Broadcast & Media organization in APAC. Prior to that, Yew-jin spent 16 years at Avid Technology, where he managed Sales, Pre-sales, Professional Services, Product Marketing and Customer Support teams across APAC, working closely with broadcasters, cable operators, post and production facilities to provide solutions that help them reach their business and operational objectives. Yew-jin had extensive television production experience prior to joining Avid, having worked as a television producer and video editor in broadcast stations and post-production houses. He holds a BS in Motion Picture studies from the University of Miami.

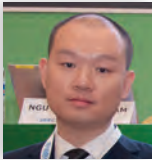


**Yogendra Pal, Honorary Chairman, India Chapter, DRM Consortium**

Yogendra Pal is the Honorary Chairman of the India Chapter of DRM Consortium, the international not-for-profit organisation which has been created for the development and implementation of the DRM standard for the digitisation of the terrestrial radio transmissions. He is also the honorary member of Board of DRM Consortium.

He was Advisor with the Ministry of Information & Broadcasting, for the implementation of Digitisation Addressable System (DAS) in the Cable TV network in the country and was closely associated with the strengthening of the Community Radio network in the country. He superannuated from All India Radio & Doordarshan as Additional Director General after over 36 years of glorious service and was associated with implementation of state-of-the-art fully digital studio setup (New Broadcasting House) in Delhi; News-on-Phone, Internet and AIRNET services and networking of AIR stations. He is the life fellow of Broadcast Engineering Society (India) and Institution of Electronics & Telecommunication Engineers.





**Kong Bin, Vice-Chairman of ABU Technical Committee, Operation Director, National Radio & Television Administration, NRTA-People's Republic of China**

Dr Kong Bin is an Operation Director at Academy Broadcasting Planning of National Radio and Television Administration, PRC, and he is the Vice-Chairman of ABU Technical Committee. He holds an MA degree in Information Management from Xi'an Jiaotong University and received his Ph.D. in Communication from Renmin University of China. Dr. Kong's research interests have focused on information technology, new media and global communication. He has won 10+ China Broadcasting Science and Technology Innovation Awards and published over 50 articles in leading journals of the field.



**Torkel Aamodt Thoresen, Senior Solution Architect, Nevion**

Torkel Aamodt Thoresen is a Senior Solution Architect, working with terrestrial networks and contribution. Previously, he was employed by Telenor Satellite from 1998 to 2018, becoming chief technologist (Broadcast) in the company in 2007. There, Torkel was instrumental in developing the technical architecture used by Telenor Satellite. Before that, he worked for the Norwegian Broadcasting Corporation (NRK), where he, amongst other, was involved in planning of the 1994 Winter Olympics in Lillehammer and the regionalisation of the NRK news broadcasting in 1996. Torkel is a graduate from Oslo College of Engineering and University of Oslo (Norway).



**Nick Piggott, Project Director, RadioDNS**

Nick has spent the majority of his career working in the radio industry, initially in programming and then moving to digital radio and online innovation.

Nick is one of the founders of RadioDNS Hybrid Radio, the open technology project that lets broadcast radio and IP work together, combining the power of broadcasting to reach many people and the power of the internet to deliver enhanced or personalised content.



**Peter Bruce, Director APAC, IABM**

Peter Bruce is the Director APAC of IABM, the International vendors' association for the broadcast, digital media and entertainment sector. Peter

is a 30-year veteran of the broadcast and media industry. After gaining an Engineering Higher National Diploma in Broadcast and Communications at Ravensbourne College, London in 1987, he began his career at Digital Visions, Austria and has worked for leading companies such as Ampex, Sony, Philips Broadcast, Vitec Group and Grass Valley. As IABM Director of APAC. Peter has established the APAC regional office from Singapore, growing and addressing the needs of the IABM members.



**Ong Kah Keong, Solution Architect, Broadcast and Media (Asia Pacific) Rohde & Schwarz Regional Headquarters Singapore**

With 14 years of experience in the media and broadcast industry, Mr Ong is the domain expert in Media Storage, Media Asset Management and Video server. Prior to joining Rohde & Schwarz, he was with Avid and Vizrt. Mr Ong started out as a qualified network engineer in Hewlett Packard for 7 years before entering the broadcast industry.



**Stephen Wong, Regional Sales Manager,  
India & South East Asia  
Rohde & Schwarz Regional  
Headquarters Singapore**

Mr Wong has more than 25 years of experience in media and broadcast

industries, ranging from the content creation, production area to the digital headend, transmission platform and STB. Prior to Rohde & Schwarz, Mr Wong had held various positions with IBM, HBO, Vyvx, Nagravision, Intelsat, Avid.



**Asaad Sameer Bagharib, Director,  
Thinking Tub Media**

Asaad Sameer Bagharib is a veteran of the media industry having spent more than 30 years in MediaCorp, Singapore, one of Asia's leading media broadcast organisations. His

last appointment was Senior Vice President of Technology Business. In that role, he was responsible for the provision of media technology solutions and project consultancy & management in Singapore and the region. After leaving MediaCorp in Sept 2013, Asaad set up his own company, S&S Solutions Pte Ltd, to provide media technology consultancy and services. He is also a Director of Thinking Tub Media Pte Ltd which provides end-to-end OTT platform services to the region.



**Jun Ho CHO, Senior Engineer, System  
Construction Department, Korean  
Broadcasting System**

Mr Jun Ho Cho is currently working for the System Construction Department, KBS. He has been working as a System Engineer for

broadcasting in the System Department of Korean public broadcaster, KBS. He worked as a software engineer for SAMSUNG Electronics R&D Center from 2006 to 2012. He joined KBS in 2012 and is now in charge of designing and improving file-based production and transmission systems.



**Jae Kwon LEE, Senior Researcher,  
Research & Planning Department, KBS  
TRI, Korean Broadcasting System**

Jaekwon Lee received M.S. from the University of Science & Technology, Korea, in 2008. In 2006-2008, he joined Electronics

and Telecommunications Research Institute as a graduate student researcher. Since 2008, he has been working for the Korean Broadcasting System as a member of the research staff. His research interests are ATSC 3.0 physical layer system including radio channel estimation and detection, PAPR reduction, network coverage prediction and optimization, 5G/LTE eMBMS broadcasting.



**Rezvaneh Sahba, Manager of Central  
Monitoring, Islamic Republic of Iran  
Broadcasting, IRIB-Iran**

I am a PhD student of Information Technology Management and Central Monitoring Manager of Technical

Department of IRIB. I have more than 12 years experiment in research center of IRIB on digital broadcasting like DAB, DRM and DVB-X and initiated using NMS in control and monitoring in different area in IRIB. I have more than 16 years experience in IRIB and spoke about IRAN Digital radio status in ABU before. Two of my papers were published in the ABU Technical Review too.



**Sota Kobayashi, Engineer, IKEGAMI**

Sota Kobayashi is a FPGA engineer at Ikegami Tsushinki. He is a member of the 4K monitor project team, and a main FPGA engineer of ViewFinder for cameras for broadcast use. In 4K monitor project, he

took charge of video process on FPGA and operation of auto payload ID response feature. He's worked at Ikegami since 2015. He has experience working at a TV program production company as a production assistant and he earned a Bachelor's degree in applied physics from Waseda University.



**Jerry Gui, Senior Staff Solutions Engineer, Dolby Laboratories, Singapore**

With more than a decade of experience in the broadcast industry, Jerry Gui works closely with free-to-air broadcasters, Pay TV and OTT Operators in South East Asia. As the Senior Staff Solutions Engineer at Dolby Laboratories, he is responsible enabling Dolby technologies with proper deployment and implementation. Jerry has led the company's efforts to successfully launch Dolby Digital Plus 5.1 surround sound with more than 10 broadcasters and operators across South East Asia.

Jerry held the position of Principal Engineer at MediaCorp Singapore prior to joining Dolby Laboratories in Year 2011. Jerry has been instrumental in new technology deployment at the TV station and has inaugurated MediaCorp's first HD channel in Year 2007. Jerry possesses a Bachelor of Communication Engineering Degree from RMIT University, Australia.



**Laurent Jardin, Solution Architect, Dalet Digital Media Systems**

Laurent Jardin is a Solution Architect for Dalet, a worldwide leader in software and solutions for media workflow. Laurent has been with Dalet for over 8 years, worked in numerous functions and has been based in various locations across the APAC region. Most recently, as a Solution Architect, he provides deep expertise to improve and maximize the efficiency and output of media and broadcast operations for broadcasters and digital content producers across Asia Pacific.



**Tom Sutherland, General Manager – Asia, MetraWeather**

Tom has had over 30 years' experience in technical and commercial roles in meteorology serving a wide range of industrial customers including Media and Marine. He originally trained as a Meteorologist and worked in roles that included Meteorological Instrumentation, Meteorological Observing Networks and Management Positions. Tom initially led the commercialising of services and products for consumer and industrial markets in New Zealand. He then initiated and led MetraWeather's expansion into Australia and more recently, Asia.



**Alexander Zink, Senior Business Development Manager, Digital Radio & Streaming Applications, Fraunhofer**

Since 2000, Dipl.-Ing. Alexander Zink, MBA, works at the Fraunhofer Institute for Integrated Circuits (Erlangen, Germany) as Senior Business Development Manager, Digital Radio and Streaming Applications. Initially he developed the mobile and location based information system UMIS (Universal Mobile Information System). From 2001 on he focused on the professional broadcast systems "Fraunhofer DRM, DAB ContentServer". Since 2002 he is project director for Journaline, an interactive text based information system for digital radio. In addition he works in the fields of AudioServers, software defined radio, transmission protocols, technology development and standardization, and IP management and licensing. For Digital Radio Mondiale (DRM) he acts as Vice-Chairman of the DRM Consortium and Vice-Chairman Technical Committee. In addition he is an active member of the WorldDAB Technical Committee and various DAB and DRM work groups.



**Mariette Peters-Goh, Associate Director: Knowledge, Innovation & Technology, WongPartnership LLP, Singapore**

Mariette obtained both her Bachelor of Laws and Master of Laws from the University of Malaya. She spent a few years as an academic at the University of Malaya, lecturing and researching in the Intellectual Property law, Gender law, and the Law of Evidence. She then spent the next 15 years in a Kuala Lumpur legal firm, specialising in Knowledge Management, Multimedia and Cyber laws. She also worked on several committees set up by the Malaysian Government to deal with cyber laws and cyber security. She is now Associate Director of Knowledge, Innovation and Technology at WongPartnership LLP, Singapore and continues to lecture and present papers at both local and international conferences on areas of her interest. Her books, *The Law of Evidence in Malaysia* and *To be or not to be ... a Lawyer* are books used both by Malaysian law students and lawyers.



**Cath Dwyer, Manager Radio, RN and Radio Australia**

Cath Dwyer is Manager Radio, RN and Radio Australia for the Australian Broadcasting Corporation. Her portfolio includes responsibility for the strategic alignment of ABC Radio and Audio content across channels and platforms, as well as leading the strategy and programming for the ABC's national ideas network (RN), Asia Pacific Radio service (Radio Australia) and the ABC Listen app. The ABC's DAB+ stations include eight metropolitan radio stations, as well as seven specialist DAB+ only stations covering music, sport and children's content.

In this presentation Cath will share the success of the ABC's strategy to extend audience reach across Australia with mainstream and specialist content and niche formats, and outline opportunities for counter programming and content development through DAB+.



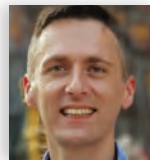
**Tomas Chen, Assistant Manager, Sony Corporation of Hong Kong Limited**

Tomas joined Sony in 2005 and has been engaged in broadcast business solutions in TV station market in Taiwan. Along with Taiwan HD migration, he has finished more than 30 system projects for HD studios, OB Vans and archive systems. Latest projects were 4K migration for Taiwan broadcasters or media industry. And Tomas helped customers to complete 4K/HDR concert, 4K studios and 4K OB Vans. In 2018, Tomas transferred to Sony Hong Kong to take up Optical Disc Archive product marketing, as well as system solution business promotion in Asia Pacific region.



**Charles Sevier, CTO Unstructured Data Solutions, Dell EMC (APJ + GC Region)**

Charles Sevier comes from the Media industry and also provides focus on solutions for Automotive, AI, FSI, Smart Cities and other sectors across APAC. Prior to joining Dell EMC he was Technology Director for leading broadcaster and publisher Nine Entertainment Co. Australia. Charles is working with customers to help define their digital transformation – covering scale-out File & Object storage, multi-cloud and ML / DL for “useful AI business outcomes”. He has a BE (Hons) from University of Melbourne and a Master of Business and Technology from UNSW.



**Paul Shutt, Senior Director, Media Asset Management, Vizrt Asia Pacific**

Paul Shutt is Senior Director of Media Asset Management for Vizrt Asia Pacific. He has worked in the digital media domain for 20 years. After joining Vizrt in Asia Pacific in 2010, he has lead successful digital workflow and media asset management projects of all sizes across the region, from small agile systems to enterprise scale digital transformation programs.



**Syed Mokhsien b. Syed Mansor, Head of New Media Management Department, Malaysian Communications and Multimedia Commission (MCMC)**

Graduated from the University of Malaya with a Bachelor's Degree in Computer

Science, with 15 years of experience within the IT, Communications, and Multimedia sector.

He is currently heading the Network Media Management Department of the Malaysian Communications and Multimedia Commission (MCMC); which is responsible among others, in providing technical and regulatory intervention and assistance to Law Enforcement Agencies in Malaysia, in enforcing the various written laws applicable in Cyberspace.



**Steve Ahern, CEO, International Media & Broadcasting Academy**

Steve Ahern is an internationally recognised broadcast trainer, new media specialist and media business consultant.

He is the author the text book Making

Radio, and the proprietor of two successful online trade-publications for the Australian and Asian radio industries. Steve is chairman of several media companies and is on the board of the Community Broadcasting Foundation of Australia. He was previously Director at Australia's national Film Television & Radio School and a senior executive at the Australian Broadcasting Corporation. Steve currently works with media companies around the world to help them evolve and adapt successfully in the changing media environment.



**Ruxandra Obreja, Chairman/President, Digital Radio Mondiale**

Ruxandra Obreja has been the Digital Radio Mondiale Consortium Chairman since 2008. She is representing and enjoying the support of Babcock

International and BBC as Chair of the Consortium Steering Board, a position held since 2008. DRM is a not for profit international organisation. Its aim is to ensure that the stakeholders work towards the same goal: the global and mass scale take up of the DRM standard. Ruxandra has spoken at international broadcasting conferences, workshops and written articles promoting digital radio and DRM (is currently a blog contributor to Radio World).



**Deb Hishon, Media Measurement Director, GfK**

Deb is a media professional who has been working on Radio Audience Measurement (RAM) contracts for over 17 years and in media research for over 20. Since joining

GfK in 2013, where she was tasked with establishing and leading the local client service team, Deb has played a key role in launching the Australian and New Zealand RAM business. As GfK's Media Measurement Director ANZ, Deb ensures contractual requirements are met, KPIs are delivered and new opportunities are explored within the scope of the contract. She is regularly called upon to develop and present radio and audio focused research pieces that provide additional insights for the wider radio industry. Deb holds a Bachelor of Business Degree in Marketing & Advertising, and has completed a Certificate IV in Workplace Training and Assessment.





**Aaron Alphonso - Chief Technology Officer - Macquarie Media Limited**

As Chief Technology Officer of Macquarie Media Limited (MML), Aaron's responsibilities include the oversight of Broadcast and Information Technology related services, as well as managing MML's Revenue and Yield Management activities, Digital Platforms and Development, and Broadcast Operations. Aaron began his career in FM and Satellite Radio in Astro Radio in 2002, before joining Commercial Radio Australia in 2006, where he was deeply involved in the rollout of DAB+ across Australia and developed the backend software that provided the very first publicly receivable rich multimedia and text displays on Australian DAB systems. He subsequently joined Southern Cross Austereo, where he managed the Sydney Technology Team, before joining MML in 2015. Aaron holds a Bachelor of Information Technology (Hons) with a major in Management from the University of Malaya.



**Grant Blackley, Chief Executive Officer & Managing Director, Southern Cross Austereo (SCA)**

Grant is a highly experienced and well regarded media industry executive. His media industry career spans the past 30 years during which time he served in senior leadership roles at TEN Network Holdings Limited (TEN Network), finally as CEO from 2005 through to 2010. During 24 years with the TEN Network, Grant served in key roles in media sales, digital media and multi channel program development as well as being responsible for group strategy, acquisitions and executive development programs. Grant was appointed CEO and Managing Director of Southern Cross Austereo in May 2015. SCA is Australia's biggest entertainment company with the ability to reach more than 95% of the Australian population through its radio, television and digital assets.



**Do Anh Duc, Technical Engineer, Voice of Vietnam**

DO ANH DUC is Technical Engineer at the Broadcast Engineering Center, Voice of Vietnam. Based in Hanoi, he is in charge of managing, exploiting, repairing and developing the radio transmission and broadcasting systems of Voice Of Vietnam. His experience covers installing, operating and repairing FM, medium wave and shortwave radio systems; research and implementation of monitoring systems, control remote transmitters, deployment of broadcast radio on the internet via OTT and website, and testing digital radio standards DRM/ DRM+ and DAB/DAB+.



**Geoffrey Low, Staff Content Engineer, Dolby**

Geoffrey Low is a Staff Content Engineer who looks after content production engagements across the broadcast and OTT ecosystem for South East Asia. Based in Singapore, Geoffrey has a wealth of experience in audio recording, mixing, studio design & management in both live and post environments. Highlights of his career includes a stellar credit list working in Singapore largest recording studio, being a founding partner in his own firm to specialize in audio production for films, broadcast and CD & DVD. He is also an active trainer across SEA on surround audio production as well as designed and delivered syllabus in digital audio, recording, mixing and acoustic science.





**Jonathan Triboulet, Director APAC Operations, Skyline Communications**

Jonathan is an experienced leader who works with the Satellite, Media, Cable and IPTV industry to improve operational excellence. He believes in the need to

support the ever growing complexity of the infrastructure we manage, in a powerful yet simple way. Jonathan has been involved in the APAC region for the past 10 years, leading his team through multiple significant projects (Singapore, Malaysia, Indonesia etc...). Jonathan holds a Master's degree in Electrical Engineering from the Grenoble National Polytechnic Institute.



**Ahmad Zaki Mohd Salleh, Group General Manager of Engineering, Media Prima Berhad**

Dr Ahmad Zaki is in charge of all engineering operations, production and planning in Media Prima Berhad,

including all aspects of engineering with regards to DTV implementation. He has been actively involved with the national committees for the development of digital TV standards in Malaysia. Dr Zaki holds an executive MBA in Strategic Marketing from Berne University of Applied Sciences, Switzerland, and a PhD in Engineering from the University of Aberdeen.



**Garry Kum, Head of Engineering, Television Broadcasts Limited, Hong Kong**

Garry Kum joined the TVB Engineering Division in 1995 and was promoted to his current position as Deputy Controller in

2016. In addition to all technical and operational aspects of conventional analogue, digital terrestrial and satellite television services, he provides engineering support to IT and new media based operations such as pay TV, and local and overseas OTT services. Mr Kum is also TVB's ABU Technical Liaison Officer and a member of the ABU Technical Bureau.



**Hong, Young Kyung, ABU Technical Liaison Officer, Production Technology Management Department, Korean Broadcasting System (KBS-Korea)**

Ms Hong, Young Kyung joined KBS in 2005. She began as a sound engineer in the TV

Technology Department, participating in informational, entertaining programs as well as drama. She was later transferred to the Equipment Management Department, and then took up the position of establishing the media strategy in the Future Strategy & Planning Department. She now works in the Production Technology Management Department, in charge of international relations. Her expertise includes live broadcasts, sound editing, mixing and mastering.



**Yoshimitsu Tsurimaki, Senior Manager/ Social System Innovation, NTT Data Institute Of Management Consulting, Inc.**

Worked for digital broadcasting service development production and had been creating data-broadcasting contents,

HTML5 contents and related systems as a producer and or technical director.

Had experience of supporting Ministry of information and communication (MIC) Japan for ASEAN countries, south African countries and now north and south American countries for finding out interoperability of Next-Gen TV.

# WORKSHOP SPONSORS



## WorldDAB

WorldDAB is the global industry association responsible for defining and promoting DAB digital radio. By bringing together radio industry professionals, WorldDAB provides knowledge and expertise that helps countries successfully adopt and implement broadcast digital radio. Our 1250+ experts from 100+ member organisations cover 30 countries across the globe and include public and commercial broadcasters, regulators, network providers and manufacturers of receivers, chips, professional equipment and automobiles. WorldDAB's Asia Pacific Committee works with broadcasters to provide guidance and advice on the successful roll-out of DAB+ digital radio across the Asia-Pacific region.



## Rohde & Schwarz

Rohde & Schwarz, an innovator in broadcast and media for over 70 years, covers the entire signal processing chain for digital video and audio content – from ingest and playout to encoding and multiplexing, from contribution to satellite and IP networks to terrestrial transmission. It includes solutions for monitoring in the studio, as well as for monitoring streaming and broadcast services and entire broadcast networks. R&S also offers a diverse range of instruments for testing end user equipment and infrastructure components in development, production and quality assurance. R&S invests in an IP and software based future built with the blend of innovation, experience and stability that the company can offer.



## Dolby

Dolby transforms the science of sight and sound into spectacular experiences. Through our innovative research and engineering, we develop breakthroughs that we share with the world through collaborations that span artists, businesses, and consumers worldwide.



## DALET

Dalet solutions and services enable media organisations to create, manage and distribute content faster and more efficiently, fully maximising the value of assets. Based on an agile foundation, Dalet offers rich collaborative tools empowering end-to-end workflows for news, sports, program preparation, post-production, archives, radio, education, governments and institutions. Dalet platforms are scalable and modular.

They offer targeted applications with key capabilities to address critical functions of small to large media operations - such as planning, workflow orchestration, ingest, cataloguing, editing, chat & notifications, transcoding, play out automation, multi-platform distribution and analytics.

Dalet systems are used around the world at hundreds of TV and Radio content producers, including public broadcasters (BBC, CBC, France TV, RAI, RFI, Russia Today, RT Malaysia, VOA), commercial networks and operators (Canal+, FOX, MBC Dubai, MediaCorp, Mediaset, Orange, Time Warner Cable, Warner Bros, Sirius XM Radio) and government organisations (Canadian House of Commons, Australian Parliament, UK Parliament).



## DVB

DVB is an industry-led consortium of the world's leading digital TV and technology companies, such as manufacturers, software developers, network operators, broadcasters and regulators, committed to designing open technical specifications for the delivery of digital TV.



## Whiteways Systems Pte Ltd

Whiteways is a private limited Singapore-based systems integrator, dealer, reseller and service provider. They design, supply, install, integrate and commission complex solutions for customers who are involved in video production, post production, film and broadcasting industries throughout the Asia-Pacific region.

Whiteways is focused on providing cutting edge technologies for digital media creation, management and distribution. They sell products on a stand-alone basis and they provide turnkey solutions such as supply, design, commissioning of studios, newsroom systems, control rooms, uplink/downlink, DSNG.

They provide service such as digitizing tapes, providing annual maintenance and support, acoustics treatment for studios, lighting set up for studios, specialised training and a host of other services. They offer consultancy services by providing a system audit, technical feasibility study, techno-commercial study, knowledge transfer and other consultancy services.



## DRM Digital Radio for All

Digital Radio Mondiale™ (DRM) is the universal, openly standardised digital broadcasting system for all broadcasting frequencies.

The DRM standard is optimised for all coverage needs, compatible with existing frequency assignments:

- DRM broadcasts on short, medium and long wave up to 30 MHz provide for the efficient coverage in large areas with at least FM quality, while significantly reducing power consumption.
- DRM transmissions in the VHF bands above 30 MHz (including the FM band) enable the setup of flexible local and regional services while keeping broadcasters in control of their own transmissions, with up to 3 stereo audio programmes plus multimedia components in half the bandwidth of a single analogue FM signal.

All DRM configurations share the same advanced functionality: radio and multimedia services based on the highly efficient audio codec MPEG xHE-AAC and free-to-air Journaline multi-lingual text information, detailed service signalling, service linking (including to analogue AM/FM services) and DRM EWF – Emergency Warning Functionality. DRM also offers a wealth of enhanced features: native Unicode support, graphical station logos via SPI, Slideshow images, traffic and travel information, and data services.

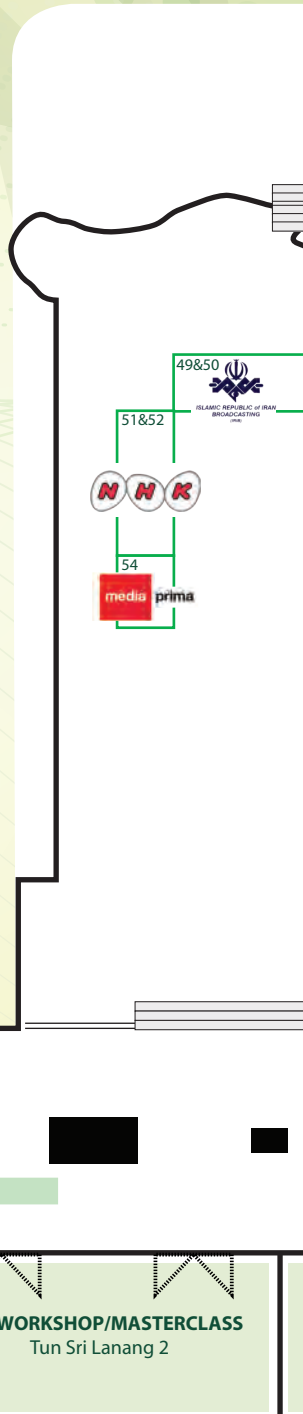
# ABU DIGITAL BROADCASTING SYMPOSIUM 2019

## 15 years 2005-2019

### DIGITAL TRANSITION & TRANSFORMATION

## EXHIBITION FLOOR PLAN

- |  |                               |                             |
|--|-------------------------------|-----------------------------|
| 1. Lynx-Technik Pte Ltd                | 24. Eddystone Broadcast       | 44 & 45. Ideal Systems      |
| 2. Content+Technology                  | 25. Skyline Communications    | 46. WorldDAB Pavilion       |
| 3 IABM                                 | 26. LS telcom                 | • AVT                       |
| 4. Infotech Solutions PT               | 27. MetraWeather              | • Factum Radioscape         |
| 6. Etere Ptd Ltd                       | 28. Stagetec Asia Sdn Bhd     | • GatesAir                  |
| 7. NOA GmbH                            | 29. MIRACK Technologies       | • Paneda                    |
| 8. MSA Focus Intl Ltd                  | 30. ENENSYS                   | • Xperi                     |
| 11. Orban Europe GmbH                  | 31. MEASAT                    | 47 & 48. China Broadcasting |
| 12. JAA Systems Sdn Bhd                | 32 & 33. SONY                 | 49 & 50. IRIB R&D           |
| 13. Radio Frequency Systems            | 34. ETA Network Systems       | 51 & 52. NHK-Japan          |
| 14. PROGIRA                            | 36. Mahajak Trio Electronic   | 53. Integriti Padu Sdn Bhd  |
| 15. EXHIBITOR LOUNGE                   | 37. Uxera Sdn Bhd             | 54. Media Prima             |
| 16. Funique VR Studio by XR Associates | 38. ELEVATE BROADCAST         |                             |
| 17. VR/AR Association                  | 39. NEVION                    |                             |
| 18. NAUTEL                             | 40. MEDIAGENIX                |                             |
| 20. Bridge Technologies                | 41. WorldDAB                  |                             |
| 21. Whiteways Systems                  | 42. Radio Television Malaysia |                             |
| 22 & 23. Rohde & Schwarz               | 43. Canara Lighting           |                             |





Coffee shop / Lunch area



neviON

MEDIAGENIX

world dab



DBS CONFERENCE ROOM  
Taming Sari 1



Taman Mahsuri

42 rym

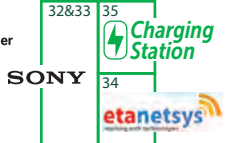
43 CANARA Lighting

44&45 IDEAL

PROGIRA



DBS EXHIBITION AREA  
Taming Sari 2 & 3



12 jaas

11 orban

DISCUSSION AREA

8 FOCUS



DBS WORKSHOP/MASTERCLASS  
Tun Sri Lanang 1





# EXHIBITORS

**LYNXTechnik AG**  
Broadcast Television Equipment

## Booth 1: Lynx-Technik Pte Ltd

LYNX Technik AG is a technology provider of the modular interface solutions for broadcast and professional use. LYNX Technik is an independent privately owned company with its headquarters, research & manufacturing facilities based in Weiterstadt, Germany. Sales and Support is managed from its headquarters in Germany, USA (California), and Asia (Singapore). Lynx-Technik Pte Ltd incorporated in 2013 is the Asia Pacific HQ servicing the Asia Pacific Region offering pre-sales and after sales support.

Products: audio/video/fiber conversion, audio/video distribution, fiber splitters, CWDM mux/demux, audio embedding/de-embedding, audio delay, image processing, frame synchronizers, test generators, 4K transmission solutions, rack frames and accessories.

Brands: Series 5000 rack/card based series, APPolo control system, yellobrik standalone plug and play modules and yelloGUI, Testor and Testor | like 3G digital test signal generators.

### Contact:

LYNX-Technik Pte Ltd Broadcast Television Equipment  
114 Lavender Street CT HUB2 #05-92  
Singapore 338729  
T: +65 6702 5277 | F: +65 6385 5221  
infoasia@lynx-technik.com



## Booth 2: CONTENT+TECHNOLOGY magazine

For over 15 years Content+Technology magazine has been serving content production and delivery professionals throughout Australia, New Zealand, Southeast Asia and beyond. In 2012, to better serve those readers, we established two separate editions - Asia and Australia/New Zealand.

C+T has always acknowledged the interconnected nature of the Asia Pacific - in technology dissemination, project collaboration and, especially, in the flow of knowledge and people. C+T Asia (Circ. 3250) is distributed from Singapore, while C+T ANZ (Circ.3480) is produced from Sydney. Both are supported by our weekly C+Tmail eNewsletter.

Phil Sandberg, Publisher  
Tel: +61 (0)414 671 811  
papers@broadcastpapers.com

Adam Buick, Advertising Sales Manager  
Tel: +61 (0)413 007 144  
adam@broadcastpapers.com  
www.content-technology.com



## Booth 3: IABM

IABM is the international trade association for suppliers of broadcast and media technology. IABM facilitates the important networking and interaction between suppliers that shape and define the unique ecosystem of the broadcast and media technology industry. IABM supports member companies with a comprehensive range of services across market intelligence, training, events, technology, exhibitions, business standards and best

practices. IABM's mission is to be an ever more powerful beacon illuminating the way forward, highly responsive to all our members' needs and helping them to successfully navigate change and prosper.

IABM

3 Bredon Court,  
Brockridge Park, Twynning,  
GL20 6FF, UK

Main Office: +44 (0)1684 450030

marketing@theiabm.org | www.theiabm.org



#### **Booth 4: Infotech Solutions PT**

"Technology Solutions for Media Convergence" by Infotech address the needs of television, radio, print, internet, mobile, pay TV, cinema, digital signage and telecom media as well as advertisers, content creators and associated service providers in an integrated manner. Infotech also provides e-Commerce, mobile and social media applications and support.

Over 18 years, Infotech's Gen21-BMS manage processes for broadcast, advertising and content for well over 250 channels in some of the largest Media Groups around Asia.



Products: Gen21 Broadcast Management Solutions

Gen21 BMS manages advertising, content, and subscriber related business processes for broadcasters with its integrated suite of modules. From Scheduling programs, Media Order booking, Promos, Traffic Log handling and Advertisement billing, to Content Acquisition, Rights, Library, Workflow and Costing. Gen21 incorporates extensive functionality and processes required by large broadcasters to run complex multi channel, multi region stations and networks.

Gen21 Enterprise, Smart and Elite versions provide required functionality for large and medium sized TV Stations and Pay TV networks. Gen21 integrates with leading Broadcast Automation, MAM, News Room, EPG and ERP systems for seamless broadcast operations.



#### **Booth 6: Etere Ptd Ltd**

Etere was established in 1987 it is amongst the worldwide leaders in Media Asset Management (MAM) and channel-in-a-box software solutions. Etere Media Enterprise Resource Planning (MERP) framework of scalable solutions are used by media enterprises across the end-to-end workflow. Etere MERP modular software including MAM, Airsales, Ad Insertion, Playout Automation, Broadcast Management System, HSM Archive, Newsroom Computer System (NRCS), Broadcast Management System, Broadcast video over IP, Censorship, Closed Captioning and Subtitle Management are built with an innovative architecture, offering the best flexibility and reliability in the market. Etere headquarters is in Singapore and it provides a worldwide 24/7 support.

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



### Booth 7: NOA GmbH

NOA is the leading global provider of flexible turnkey solutions for quality-controlled digitization, management, and archiving of audio/video content. Scalable to suit collections of all sizes, NOA's products help to ensure long-term preservation of media and support enterprise-wide collaboration, efficiency, and productivity by enabling fast and accurate identification and retrieval of clips from the full range of an enterprise's archive.

NOA's easy-to-use proprietary technologies are today installed in some 30 high-profile enterprises worldwide, including national broadcasters and national archives. NOA is committed to the ongoing development of innovative technologies to ensure the maintenance of invaluable cultural heritage for future generations.

Abderrahmane BESSAIH  
Sales Director MENA & ASIA  
NOA GmbH  
Johannagasse 42  
A - 1050 Wien  
Tel: +43 -1-5452700 | Fax: +43-1-545270014  
Mob: +33-603 331 610  
a.bessaih@noa-archive.com | www.noa-archive.com



### Booth 8: MSA Focus International Ltd

MSA Focus International Limited is a world-leading developer of Broadcast and On-Demand Management Systems, with solutions successfully deployed at sites in at least 30 countries across four continents since 1988, and a global 24/7 support network.

While continually evolving systems and software to deliver tailored solutions, MSA Focus' routinely look to

leverage cutting-edge technologies and approaches to provide the best solutions for content providers in the ever-evolving challenge to profitably accommodate changing viewing habits and consumption methods.

Along with integration to systems from complementary suppliers, MSA Focus' main strategy is the delivery business process solutions to improve productivity and profitability.

B-1008, Block B, Kelana Square No. 17, Jln SS7/26,  
47301 PJ, Selangor  
MSA Focus International Ltd  
Tel: 603 7806 1358  
marketing@msafocus.com | www.msafocus.com



### Booth 11: Orban Europe GmbH

Orban Optimod Audio Processing. Since the early 70's Orban with its renowned Optimod Series has been the leading manufacturer of AM – FM – DAB – TELEVISION Loudness Controllers and Streaming Audio Processors.

Orban introduced the first FM Audio Processor mid 70's. In 1981 we introduced the very first TV Loudness Controller the OPTIMOD TV 8180A of which we sold thousands to Broadcasters around the globe.

At Orban we are proud to have been successfully engineering and manufacturing Television Loudness Controllers, AM, FM and DAB processors for more than 40 years in a market which is constantly evolving. From the BBC to ABC many Broadcasters rely on the OPTIMOD to ensure that their audio quality is perfect.

Orban Europe GmbH  
Monreposstrasse 55, D71634 Ludwigsburg  
Germany  
Tel: +49 71412266 0 | Fax: +49 71412266 7  
pjlee@orban-Europe.com | www.orban.com



### Booth 12: JAA Systems Sdn Bhd

JAA Systems Sdn Bhd is a leading international company based in Kuala Lumpur, Malaysia that handles IT, Audio & Video related markets in South East Asia region. We specialize in Audio, Video, OTT, Transmitter/Antenna systems and SAT technologies for Broadcast, Live Sound and IT markets. Our principal partners include Junger Audio, Calrec, Prodys, Merging Technologies, Orban, Klotz, Elletronika and MLA. We are also Dolby Lab. Partner for Malaysia, Indonesia and Vietnam. We provides distribution of partner products, consultancy & solution provider, maintenance support, professional training services, TV and Radio streaming, FM transmitters and satellite services like VSAT and others. Welcome to the world of JAA.S!



### Booth 13: Radio Frequency System

Radio Frequency Systems is a global designer and manufacturer of cable and antenna systems, providing RF Systems solutions for cell-based mobile communications, in-building, in-tunnels, television and radio, radio-link networks, HF and defence.

RFS undertakes activities in R&D, manufacturing, installation and maintenance, providing total-package wireless infrastructure solutions for commercial broadcasting, PTT and defence radio communications industries. Specializing in broadband multi-channel broadcast systems, RFS designs and manufactures world-leading channel combining and filtering technology, flexible air-dielectric transmission line, RF switch frames, and a range of antenna options, including tailored panel arrays.

RFS is fully conversant with all global analogue and digital broadcasting standards, including emerging mobile TV technologies. We are represented on six continents, with nine manufacturing center-of-excellence (Germany, France, US, Brazil, Russia, China, Denmark, Mexico and Australia) and 36 technical support and sales offices.

Ashley Bicknell  
Broadcast Projects & Systems Sales, Engineer  
Radio Frequency Systems  
36 Garden Street, Kilsyth, VIC, 3137  
AUSTRALIA  
Tel: +61 3 9751 8551 | Fax: +61 3 9761 5711  
Mob: +61 413 200 680  
Ashley.Bicknell@rfsworld.com



### Booth 14: PROGIRA

Founded in 2003, PROGIRA are pioneers in planning, designing, and optimization of radio-frequency networks. Our range of cutting-edge software and solutions empower clients to achieve their network coverage requirements, reduce cost and resolve digital dividend. Our state-of-the-art algorithms enable accurate planning for maximum efficiency. With focus on innovation and dedication to introducing powerful solutions, PROGIRA launched two brand-new software in October 2018: PROGIRA® plan for server modernizes radio-frequency network planning through automation, and PROGIRA® manager - the ultimate spectrum management system, designed with a strong foundation for customization, scalability, and security. Currently, we have clients from 50+ countries around the world.

Pavel Kokoshka  
Area Manager  
Tel: +46 920 750 50 | Mob: +79262887337  
pavel.kokoshka@progira.com | www.progira.com

# Funique

Future x Unique



## Booth 16: Funique VR Studio by XR Associates

An award-winning content creator, Funique VR is dedicated to creating highest quality of Virtual Reality content both for entertainment and education. Funique provides total solution of 8K stereoscopic live-action immersive VR experiences. From storytelling to customized VR camera design, we understand the technical and narrative challenges of creating successful VR content.

XR Associates -XR Associates is a technology advisory firm based in Kuala Lumpur. It provides consultancy services & complete technology solutions to corporates, schools, government & startups. Including apps, interactive content, 360 filming & esports.

Ellen Kuo

Tel: +886-2-2557-3601 | ellen.kuo@funique.tv



## Booth 17: VR/AR Association

The VR/AR Association (VRARA) is the global industry association for VR & AR, designed to foster collaboration between companies that accelerates growth, fosters research and education, develops industry best practices and guidelines. VRARA's programs and initiatives are designed to accelerate anyone's growth, knowledge, and connections.

The Malaysia Chapter of the VR/AR Association is the VRARA's arm in Malaysia. Its mission is to strengthen the VR & AR ecosystem in Malaysia by bringing together technology suppliers, content creators, hardware providers and educators, fostering collaboration between members, and connecting to the global VRARA network.

Andrew Yew

+60 10 212 2135 | malaysia@thevrara.com



## Booth 18: Nautel

Nautel offers the broadest portfolio of digital/analog solid-state radio transmitters on the market today. Our transmitters range from 1 - 2000 kW AM/MW systems & 300 W - 88 kW FM systems. More than 16,000 Nautel transmitters are deployed in 177 countries across the globe.

Charles W. Kelly Jr.

Sales Manager, Asia Pacific & Russia

T: +1-317-703-5501 | F: +1-902-823-3183

ckelly@nautel.com | Skype: cwkelly



## Kintronic Labs

Kintronic Labs is a global leader in the design and manufacture of high power MW DRM or HD-capable digital broadcast transmission systems for fixed or mobile sites. Kintronic Labs serves the worldwide radio broadcast antenna system market, from the frozen Artic Circle to the blistering deserts of the Middle East.

Tom King

CEO, Kintronic Labs

Tel: +1-(423) 878-3141 | Fax: +1-(423) 878-4224

tking@kintronic.com





### Booth 20: Bridge Technologies

Bridge Technologies is a market-leading developer of video service analysis and monitoring systems. Used by leading satellite, terrestrial, cable, IPTV and OTT service operators, Bridge Technologies protects over 20,000 channels to more than 700 million subscribers in 94 countries; helping to improve technical quality and operational efficiency; improving subscriber quality of experience whilst reducing operational costs. Learn more @ [www.bridgetech.tv](http://www.bridgetech.tv)



### Booth 21: Whiteways Systems PTE LTD

Whiteways is a private limited Singapore-based systems integrator, dealer, reseller and service provider. They design, supply, install, integrate and commission complex solutions for customers who are involved in video production, post production, film and broadcasting industries throughout the Asia-Pacific region.

Whiteways is focused on providing cutting edge technologies for digital media creation, management and distribution. They sell products on a stand-alone basis and they provide turnkey solutions such as supply, design, commissioning of studios, newsroom systems, control rooms, uplink/downlink, DSNG.

They provide service such as digitizing tapes, providing annual maintenance and support, acoustics treatment for studios, lighting set up for studios, specialised training and a host of other services. They offer consultancy services by providing a system audit, technical feasibility study, techno-commercial study, knowledge transfer and other consultancy services.



### Booth 22&23: Rohde & Schwarz

Rohde & Schwarz, an innovator in broadcast and media for over 70 years covers the entire signal processing chain for digital video and audio content – from ingest and playout to encoding and multiplexing, from contribution to satellite and IP networks to terrestrial transmission. It includes solutions for monitoring in the studio, as well as for monitoring streaming and broadcast services and entire broadcast networks. R&S also offers a diverse range of instruments for testing end user equipment and infrastructure components in development, production and quality assurance. R&S invests in an IP and software based future built with the blend of innovation, experience and stability that the company can offer.

ROHDE & SCHWARZ MALAYSIA Sdn Bhd.  
PAT SQUARE  
Jalan Pelukis U1/46  
Temasya Industrial Park  
40150 Shah Alam  
Selangor, MALAYSIA  
Tel: +603 5569 0011 | Fax: +603 5569 0088  
[support.malaysia@rohde-schwarz.com](mailto:support.malaysia@rohde-schwarz.com)  
[www.rohde-schwarz.com/my](http://www.rohde-schwarz.com/my)

**EDDYSTONE**

BROADCAST

**Booth 24: Eddystone Broadcast**

Eddystone Broadcast is a world leading designer and manufacturer of FM Transmitters / Stereo Generators / Exciters / Audio Source Switchers / Control & Monitoring Systems built around a common modular design that offers hot pluggable modularity in the 500W-20kW range. Common amplifiers, controllers and PSU's are used throughout, thus enabling multi-site operators to reduce spares holdings in support of their networks. Eddystone exports to some of the largest broadcasters across the globe offering onsite and full 24 hour remote assistance. Our 5 year warranty gives piece of mind and our build quality is second to none.

sales@eddytone-broadcast.com | +44(0)1789762278

**Booth 25: Skyline Communications**

Skyline Communications is the global leading supplier of end-to-end multi-vendor NMS, OSS and orchestration software solutions for the broadcast, satellite, cable, telco and mobile industry. Its award-winning flagship DataMiner network management platform enables end-to-end integration of the most complex technical ecosystems. The platform heralds a new generation of sophisticated artificial-intelligence-powered solutions and comprises highly innovative features, such as the brand-new DataMiner Augmented Operation concept. Skyline has offices and a vast network of local partners around the world. The company has over 6000 systems deployed in more than 125 countries and remains a 100% independent NMS/OSS software publisher.

Skyline Communications  
Ambachtenstraat 33  
8870 Izegem, Belgium  
Tel: (32)51 313569 | info@skyline.be | www.skyline.be

**Booth 26: LS telcom**

LS telcom is the global leader in spectrum efficiency. Its broadcast portfolio includes network planning software, consulting, engineering and measurement services. Training on technologies, standards, and regulations as well as turnkey transmitter installations complete its area of expertise. LS telcom now also provides an unprecedented service; it carries out very cost-effective antenna measurements via remote controlled miniature helicopter.

Its cutting-edge broadcast planning software CHIRplus\_BC for TV, DVB-T (& T2 & T2-lite), ISDB-T, ATSC (& 3.0), DTMB, CMMB, FM, LF/MF DAB(+), DRM(+) was the first of its kind on the market for these technologies.

Milos Pavlovic, Sales Director Broadcast  
mpavlovic@lstelcom.com | +497227 9535 600  
Address: LS telcom AG, Im Gewerbegebiet 31-33, 77839 Lichtenau, Germany

**Booth 27: MetraWeather**

MetraWeather is the international brand of the Meteorological Service of New Zealand Ltd which employs over 300 staff. MetraWeather has been supplying broadcasters throughout Asia since 2005, with offices in Sydney and Bangkok and support staff based in Malaysia and the Philippines.

MetraWeather is Asia / Pacific's leading full-service weather agency offering the very best weather, ocean and climatological data presented via WeatherscapeXT; our state-of-the-art broadcast weather graphics application.

We are excited to launch Weatherscape Scenes at DBS2019. Come and see how Weatherscape Scenes delivers high-end weather graphics in a cost effective and accessible way.



### Booth 28: Stagetec Asia

Stagetec Asia is a Malaysia-based distributor company, specializing in audio infrastructure network for live sound and broadcast industry. Stagetec Asia is also an exclusive partner of Stage Tec GmbH, a Berlin based manufacturer of broadcast grade professional audio mixing consoles and audio/media router. Our flagship consoles Platinum Series & Nexus has landed in many local TV & Radio studio in Malaysia since 2005. Stagetec Asia has served more than 10 years for national and international customers, including public and commercial broadcasters, TV and radio production companies. For further details visit [www.stagetecasia.com](http://www.stagetecasia.com) or email us at [sales@stagetecasia.com](mailto:sales@stagetecasia.com) and [press@stagetecasia.com](mailto:press@stagetecasia.com)



### Booth 29: Mirack Technologies

Mirack Technologies (MirackTech) is a Media Technology and Service Provider that is committed to partnering with best-of-breed technology partners to offer customized solutions to the broadcasting and media industry. Our managed services leverage on cloud technology and software-defined solution to help customers reduce OPEX, making their operations as efficient as possible. Our primary goal is to help clients simplify their technical and operational challenges. Our key solutions include Integrated Newsroom Production System, Cloud TV Playout Services together with IP Video Contribution and Delivery. Our core mission is to transform media landscape with innovative technology and exceptional service delivery to ensure best value, business growth and excitement for our customers.

For more info, visit us at [www.miracktech.com](http://www.miracktech.com). Or contact us at [info@miracktech.com](mailto:info@miracktech.com) for free consultation and demo.

Mirack Technologies Sdn. Bhd.  
F-5-23A, Pacific Place Commercial Centre,  
Jalan PJU 1A/4, Ara Damansara,  
47301 Petaling Jaya, Selangor,  
Malaysia.  
Tel: +603-7627 4523



### Booth 30: ENENSYS

ENENSYS Networks and TestTree will share a booth at ABU DBS 2019.

ENENSYS Networks offers products for Efficient Video Delivery in Digital Terrestrial TV, Targeted Content Insertion and Switches & IP Transport. Products support DVB-T/T2, ISDB-T and ATSC 3.0 including seamless transport stream switches and local content insertion.

TestTree, provides high performance RF and TS monitoring probes for multiple standards for use by broadcasters and network operators, as well as products for signal capture, analysis and generation for field and lab/R&D purposes.

ENENSYS and TestTree are part of the ENENSYS Technologies group, which also includes TeamCast, offering terrestrial and satellite modulators and Expway, offering end-to-end solutions for LTE broadcast with multicast servers and device middleware.



### Booth 31: MEASAT

MEASAT is a premium supplier of communication and video services to leading broadcasters, Direct-To-Home platforms and telecom operators. With capacity across five (5) communication satellites, MEASAT provides satellite services to over 150 countries representing 80% of the world's population across Asia, Middle East, Africa, Europe and Australia.

Working with a select group of world-class partners, MEASAT also provides a complete range of broadcast and telecommunications solutions. Services include UHD/4K, HD and SD video play-out, video turnaround, co-location, uplinking, broadband and IP connectivity services.

Tel: : +603 8213 2188 | Fax: +603 8213 2233  
sales@measat.com | www.measat.com

# SONY

### Booth 32&33: SONY

Sony is a leading manufacturer of audio, video, game, communications, key device and information technology products for the consumer and professional markets. Sony's Broadcast & Content Creation Solutions Asia Pacific business is established under Professional Solutions Company (PSAP), a division company under Sony Corporation of Hong Kong Ltd. It markets Sony's leading broadcast systems, professional video and audio products in Asia other than Japan. It also provides customized business solutions, comprehensive technical support and after-sales service to help Sony's customers stay at the forefront of their business. Contact us at: pro.sony



### Booth 34: ETA Networks

ETA Network Systems Sdn Bhd are specialist solutions provider in the Broadcast, Security & Surveillance and IT space.

Our partners include QVidium - winner of 2018 Technology Emmy Awards, KWO, DVEO - Multi Camera Broadcast Transcoding for Enterprise, Kiloview, Vmix, SAMCON, Robotics and Satamatics.

### 2018 TV Emmy Award Recipient

QVidium is proud to announce that it is the recipient of a 2018 Emmy Award for its innovative and groundbreaking patented ARQ error correction Technology.

KWO T-90 - The ultimate combination of high-performance and portability for cellular uplink with Local Cloud Bonding Server.

DVEO is pleased to announce that DVEO has won a 2018 Emmy® Award for Technology and Engineering from The National Academy of Television Arts and Sciences (NATAS)



### Booth 36: Mahajak Trio Electronic

The MAHAJAK Group (Malaysia, Thailand and Singapore) is the renowned market leader in professional audio in broadcast, audio production, IT Technologies, lighting, control & Video system in the region, specializing in consultation, design, supply and installation of broadcast, AV and live sound industries for more than 50 years. We provide consultancy services, technical advice and conduct training on sound solutions, as well as testing and repair services.

As a System Integrator, Mahajak's project portfolio in Malaysia is impressive in its own rights, having completed many integrated systems at many notable venues in this region and conduct training on sound solutions. We are an exclusive distributor for Harman Professional Solutions for broadcast vertical market, and have access to well-known brands such as JBL, AKG, Crown, Lexicon, Soundcraft, BSS, dbx, Studer, DigiTech, AMX, and Martin. Harman Professional, a US fortune 500 company is arguably the world's largest professional audio, lighting and control system company. It has its presence in all continents of the world.

We also hold distributorship rights from d&b audiotechnik of Germany, Robert Bosch sound system and PSI Audio of Switzerland. These provide familiar brands like EV (Electro-Voice) loudspeaker, Dynacord amplifier and PSI Audio swiss precision audio monitors.

MAHAJAK TRIO ELECTRONIC SDN BHD.  
Address: 4, JALAN BP 4/2, BANDAR BUKIT PUCHONG  
47100 PUCHONG, SELANGOR, MALAYSIA  
Tel: +603-80608676 / 8680  
Fax: +603-80608755  
leec@mahajaktrio.com | www.mahajaktrio.com



### Booth 37: UXERA

Uxera Sdn Bhd (formerly known as BERNAMA Systems & Solutions Advisor Sdn. Bhd) is a leader in providing software and integrated systems and solutions to the IT and Broadcast industry. UXERA has serviced over 2000 customers in more than 5 countries. In the essence, UXERA as a one-stop source for content related technology right from content creations, software development, systems integrations, transmissions and distributions vital content or data to end-users via state-of-the-art software and telecommunication networks. UXERA also functions as a provider of technical maintenance and support systems, solutions and application software related to multimedia, data, broadcasting, ERP and office automations.

UXERA today is well represented in 12 branch offices strategically located throughout Malaysia. UXERA also have its branch offices in Singapore and Jakarta, Indonesia.





### Booth 38: Elevate Broadcast

Elevate Broadcast Pte Ltd is headquartered in Singapore with local offices in Malaysia and Myanmar and servicing projects throughout Asia. Elevate Broadcast provides services in three areas: Consulting, Systems Integration and Product Supply. Each customer is unique and has a specific set of challenges from startups to established broadcasters, Elevate Consulting services can help customers with personalized solutions to align requirements with technologies in areas such as workflow, production and infrastructure. Elevate Broadcast turnkey Project Integration services from concept through commissioning. Product supply from top manufactures and specialized products. Elevate Broadcast is able to support any size operation.

Tel: +65 6871 4352 | [sales@elevatebroadcast.com](mailto:sales@elevatebroadcast.com)



### Booth 39: Nevion

Nevion's mission is to help customers leverage baseband, IP and virtualization technologies to connect and share production facilities, equipment, talent and other resources across locations, in order to make content production and distribution nimbler and more cost effective.

Nevion provides innovative network and broadcast infrastructure solutions and services to broadcasters, telecommunication service providers, governmental agencies and other industries, to manage and transport professional quality video, audio and associated data – in real-time, reliably and securely.

Nevion's solutions include media network orchestration for SDN, monitoring and protection, video routing, transport and compression, optical transport and signal processing, and transport stream processing.

Nevion solutions are used to power major sporting and live events across the globe. Some of the world's largest media groups and telecom service providers use Nevion technology, including AT&T, NBC Universal, Sinclair Broadcast Group Inc., NASA, Arqiva, BBC, CCTV, EBU, BT, TDF and Telefonica.

## MEDIAGENIX

### Booth 40: MEDIAGENIX

MEDIAGENIX enables broadcasters, telcos, content providers and other media companies to get the most out of their content across linear and VOD channels and services. Their Broadcast Management System WHATS'ON provides an integrated end-to-end solution for managing strategic planning, scheduling, promotions, media management, workflows, rights management, and analytics. WHATS'ON not only allows media companies to easily set up Linear and VOD channels, and schedule content in line with strategic, editorial, budgetary, operational and regulatory requirements, it also provides them with the backbone system they need to streamline workflows and optimise core processes in the content-centric manner this era requires.

Johan Vanmarcke  
 Managing Director MEDIAGENIX Asia Pte Ltd  
 Tel: +66 945 868 560  
[asia@mediagenix.sg](mailto:asia@mediagenix.sg) | [www.mediagenix.sg](http://www.mediagenix.sg)

MEDIAGENIX Asia Pte Ltd  
 16 Raffles Quay – #33-03  
 Hong Leong Building  
 Singapore 048581



### Booth 41: WorldDAB

WorldDAB is the global industry association responsible for defining and promoting DAB digital radio. By bringing together radio industry professionals, WorldDAB provides knowledge and expertise that helps countries successfully adopt and implement broadcast digital radio. Our 1250+ experts from 100+ member organisations cover 30 countries across the globe and include public and commercial broadcasters, regulators, network providers and manufacturers of receivers, chips, professional equipment and automobiles. WorldDAB's Asia Pacific Committee works with broadcasters to provide guidance and advice on the successful roll-out of DAB+ digital radio across the Asia-Pacific region.



### Booth 42: RADIO TELEVISION MALAYSIA

Radio Television Malaysia (RTM), the pioneer national broadcasting station, has undergone developmental changes over the years both in terms of technology and programming since its establishment in 1946. Turning 72 years by April 1st 2018, RTM will continue to play a crucial leading role in serving the Malaysian public through its diverse genres that broadcast via multi-platforms including RTM Mobile and online webcasting to garner a wider audience shares.

As the national broadcaster, RTM needs to fulfill its social obligations to realize national agenda and reaches 98% of Malaysia's population through quality programme contents that propagate good values and nation building.

Director General Office  
6th Floor, Wisma TV, Angkasapuri  
50614 Kuala Lumpur, Malaysia  
Tel: +603-2288 7303 | Fax: +603-2284 7591  
feedback@rtm.gov.my



### Booth 43: Canara Lighting

Canara Lighting, leading global studio lighting system manufacturer provides total studio lighting solution for broadcasting industry worldwide for over 40 years. They provide consultancy, design, project management, manufacturing, installation, commissioning, training and after sales service under total solution. Product range includes hi-tech LED and other lighting fixtures, rigging equipment, cabling and networking, dimming and lighting console. Products are as per international standard and CE certified. Over 800 installations are using their equipment satisfactorily. World class manufacturing facility is located in India. Currently, their products are exported to Asian countries including China, Middle East, African countries and European countries.

Mr. Ajeet Khare  
Mob: +91 9845061859  
ajeet@canaralighting.com



### Booth 44&45: IDEAL SYSTEMS (SINGAPORE) PTE LTD

We provide a full spectrum of services including consultation, design, installation, integration, as well as operational and maintenance support of state-of-the-art technology infrastructure. In addition to system solutions, we provide cloud, software and interior design services individually or as a combined service offering.

Unit 8-1, Tower 9, Avenue 5,  
Bangsar South, No 8 Jalan Kerinchi,  
59200, Kuala Lumpur, Malaysia  
Tel: +603 2242 4466 / +603 2242 4477  
sales\_sea@idealsys.com | <https://www.idealsys.com/>

**Booth 46: WorldDAB Pavilion****AVT**

AVT is a German manufacturer for high quality audio transmission products, such as IP, ISDN and POTS Telephone Hybrids as well as high-quality Audio Codecs for IP, ISDN and E1 (2-Mbit/s) networks. Furthermore, DAB and DAB+ systems for a complete DAB headend are also available. For more than twenty years, AVT has supplied broadcasting stations and telecom operators around the world. The AVT products are manufactured by German contractual companies which are certified according to ISO 9001. The Development Department together with the Sales and Marketing Department is located in Nuernberg. AVT participates in all major Audio Exhibitions worldwide.

**Factum Radioscope**

Factum Radioscope is a dynamic participant in the development, deployment and testing of Digital Audio Broadcasting (DAB/DAB+) world-wide. Our background in encoding, multiplexing, monitoring and analysis products, coupled with our experience with DAB/DAB+ transmission networks, enables our highly-experienced engineering team to offer a long-term commitment to product innovations, evolution and enhancement. Since 1997, Factum and Radioscope have been delivering innovative, reliable and cost-effective products for Digital Radio Broadcasting. Our experience and proven expertise allows us to tailor solutions to meet our customer's individual needs.

**Gates Air**

GatesAir (formerly Harris Broadcast) has been an innovator in over-the-air broadcasting for nearly 100 years, and today offers the industry's broadest portfolio

with the most energy-efficient TV & Radio transmitters to help broadcasters deliver and monetize content around the globe. GatesAir is the only company to support all digital radio standards (HD Radio, DAB and DRM/DRM.) Intraplex solutions move beyond STL to studio-to-studio transport, live remotes, and content contribution and distribution. Flexible IP codec solutions enable efficient transport over the network for these applications, ensuring that broadcasters can effectively move content between locations for virtually any on-air need.

**Paneda**

Paneda offers innovative and cost-effective DAB-solutions; safety systems, broadcast networks and broadcast systems. Nearly 200 tunnels in Norway are equipped with Paneda systems. Many local and public European broadcasters are using Paneda DAB Head-End systems with a complete range of products including multiplexing, audio encoders, data insertion and content management. [www.paneda.no](http://www.paneda.no)

**Xperi Corporation**

Xperi Corporation is a diverse technology company specializing in audio, imagining technologies, semiconductor packaging and intellectual property licensing. Since the late 1990's, the company has been innovating and supporting the commercialization of digital radio technologies, including the HD Radio brand and technology. It is currently working on the next generation of in-car digital radio solutions that combine broadcast radio with IP-delivered services in its DTS Connected Radio platform. Additionally, the company portfolio includes broadcast radio technologies including All in Media and Arctic Palm.

## CHINA BROADCASTING

### Booth 47&48: China Broadcasting

China Broadcasting is an international exchange platform dedicated to displaying the global communication, scientific research and engineering achievements of China's radio and television. We look forward to exploring the path of broadcasting to build the community of shared future for mankind through this platform with people around the world.

NO.2 Fuxingmenwai Ave. Beijing,  
China P.O.BOX 2116

Tel: +86-10-86093396 | Fax: +86-10-86093454  
lieku@abp2003.cn



### Booth 49&50: Islamic Republic of Iran Broadcasting (IRIB-Iran)

TV service was launched in 1958 in Tehran with a three-hour daily telecast. In 1966, the management of television was transferred to the government and the National Iranian Radio and Television (NIRT) was established. The National Iranian Radio and Television (NIRT) was renamed the Islamic Republic of Iran Broadcasting (IRIB) in 1979, after the Islamic Revolution in Iran.

IRIB's headquarters are located in Tehran. There are 32 IRIB centres in the provinces and 20 offices abroad. Over 30,000 employees work at IRIB. It operates eight nationwide television channels using terrestrial television transmitters for national coverage. IRIB also uses satellite feeds on Chinasat 12, 87.5°E as input signals to TV stations.

Currently, all provinces in Iran have their own radio channel and 70 percent of the provinces have their own

TV channels and a training channel has recently been launched.

IRIB is completely independent and solely responsible for the development and maintenance of its production technical systems, studios, archive centres, transmitters and associated technical facilities. IRIB also operates a teletext service, an Internet website and publishes radio-television magazines.



### Booth 51&52: NHK (Japan Broadcasting Corporation)

NHK (Japan Broadcasting Corporation) is the nation's only public broadcaster and is funded by receiving fees collected from every household with a television set. Since starting a radio service in 1925 and a TV service in 1953, this financial independence has enabled NHK to deliver impartial and high-quality programs free from influence of a third party or the government.

NHK operates four TV channels (two terrestrial and two satellite channels) and three radio channels in Japan. Its operations are run through a network of 54 domestic stations and 30 bureaus, nature, science, culture, drama and education.

As the public broadcaster in one of the most earthquake-prone countries in the world, NHK is also committed to providing accurate and timely coverage of natural disasters. During the Great East Japan Earthquake of March 2011, NHK mobilized equipment that included 15 helicopters and about 500 robotic cameras to transmit real-time images of the earthquake and the subsequent tsunami to the world.

Internationally, NHK operates two television channels, NHK WORLD TV and NHK WORLD Premium, as well as radio services in 18 languages.



### Booth 53: Integriti Padu Sdn Bhd

Since 2008, Integriti Padu (IPSB) has been providing solution oriented services to the industry. Our vision is to be the leading global solutions provider for a sustainable future.

Our client's trust to IPSB is strengthened through strategic partnerships with Local Technology ICT companies and Multinational Corporations. IPSB's many solutions including Enterprise Storage Archiving System (ESAS) & Data Lifecycle Orchestrator (DaLO) is implemented across the industry including Media & Entertainment, Oil & Gas and the public sector. As of today, we are managing over 20 Petabytes of data and the number is growing.

IPSB is recognized for our Excellence in Data Storage by Selangor SEBA 2017, Excellence in ICT by Malaysia Excellence Business Awards (MEBA) 2018 and is a member of the UN Global Compact Network Malaysia.

Alia Sarah Zainal Abidin  
 Head of Marketing Communications  
 N-5-1(A) Garden Office @ The Strand Encorp,  
 Pusat Perdagangan Kota Damansara,  
 Jalan PJU 5/1 47810 Petaling Jaya, Selangor.  
 Tel: +603- 6150 5029 | Fax : +603- 6150 4029  
 Mob: +012-224 9484  
[www.integritipadu.com](http://www.integritipadu.com)



### Booth 54: Media Prima Berhad

Media Prima Berhad is the leading fully-integrated media company in Malaysia. The project of Hybrid Broadcast Broadband TV (HbbTV) in-house research and development is still ongoing from 2013 until launched digital transmission in Malaysia. The aim of the project is to develop a model which brings together broadcast and broadband connectivity in a single transmission to end user. It is the merging of migrating analog transmission into the digital broadcast including the broadband data which offered through free-to-air television stations namely TV3, 8TV, ntv7 and TV9. Exploring the cloud management system to integrate with the digital content from traditional broadcast is one of the step to design an entirely new ecosystem evolving around connected TV's to wifi, enabling applications around TV content.

Through its digital media subsidiary, tonton is Malaysia's 1st and largest home grown video streaming service with over 6.6 million registered users and is experiencing a growth of over 18,000 registrants on a weekly basis. Bringing things up a notch in April 2016, tonton was transformed into a hybrid video service alongside it's brand new apps offering both FREE membership and the newly introduced premium service - coined tonton VIP.



**ABU  
DIGITAL BROADCASTING  
SYMPOSIUM 2019**

**15 years**  
2005-2019

**DIGITAL TRANSITION  
& TRANSFORMATION**

**MEDIA PARTNERS**





# DBS @ 15: SHARING A JOURNEY WITH BROADCASTERS



Going digital is a long and challenging journey for broadcasters in Asia. The role of the ABU Digital Broadcasting Symposium, which turns 15 in 2019, is to help make the transition easier.

When DBS was launched in 2005, a lot of Asian broadcasters had not yet started the transition to digital transmission. Many have now completed it, or are busy doing so.

The symposium has shared that journey with them, growing steadily along the way. It is now one of the region's leading events for the broadcasting industry.

The ABU launched it as a way for broadcasters to help their fellow broadcasters go digital, with the support of the broadcasting industry.





The symposium is held each year in Kuala Lumpur. It consists of a conference, an exhibition, masterclasses and workshops, and attracts more than 1,000 participants annually. In 2018, they represented 355 organisations in 48 countries.

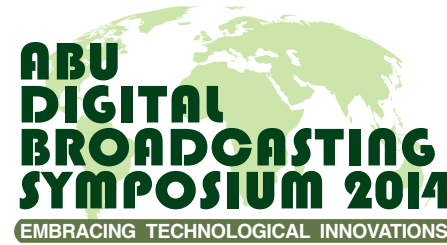
An ever-expanding range of technologies is now on the market, providing broadcasters with important new opportunities. DBS showcases these to help broadcasters make the right decisions.

The growth in participation reflects the relevance of the issues covered at the conference, workshops and masterclasses,

and the strong interest in the products and services on show at the exhibition.

The number of exhibitors has risen significantly. In 2005, DBS attracted just four exhibitors. By 2008 this had risen to 20, and by 2011 to 29. In 2018, 40 exhibitors showcased their products and services in 52 booths.

The ABU sincerely appreciates the support of those who take part each year: the conference speakers, the companies who exhibit, and the workshop and masterclass organisers. They are central to the symposium's success, and we thank them.







# ABU DIGITAL BROADCASTING SYMPOSIUM 2019

15 years 2005-2019

## DIGITAL TRANSITION & TRANSFORMATION







# ABU ENGINEERING AWARDS 2018



The Engineering Awards consist of the ABU Broadcast Engineering Excellence Award, the ABU Engineering Industry Excellence Award, the ABU Green Broadcast Engineering Award and the ABU Developing Broadcasters' Excellence Award.

In 2018, the ABU received a total of nine nominations for the awards.

The ABU Engineering Awards were judged by two panels of judges.

Mr Masakazu Iwaki of NHK-Japan was the Panel Chairman for the Broadcasting Engineering and Developing Broadcasters' awards and Mr Hamid Nayeri of IRIB-Iran was the Chairman for the Engineering Industry and the Green Broadcast awards.

The members of the panels were Mr Tharaka Mohotty of MTV-Sri Lanka, Mr Rahadian Ginging of RRI-Indonesia, Mr Naoki Kashimura of Ikegami-Japan, Mr Peter Bruce of IABM, APAC, Mr Alexander Zink of Fraunhofer-Germany, Mr Sahin Demir of TRT-Turkey, Ms Hong, Young-Kyung of KBS-Korea, Dr Fintan Mc Kiernan of IDEAL Systems Singapore, Mr Charles Sevier of Dell-EMC Australia and Mr Asaad Sameer Bagharib of Thinking Tub Media Singapore.

The sponsors of the 2018 awards were Whiteways Systems and Nautel, who were represented in Ashgabat by Mr Aale Raza and Mr Chuck Kelly respectively.



The **ABU Green Broadcast Engineering Award**, which recognises outstanding contributions in developing, implementing and/or promoting green technology in the broadcasting industry, was awarded to Radio Film & Television Design & Research Institute (DRFT), China, for the development and promotion of green technology in China's radio and TV projects.

Mr Aale Raza, Director, Whiteways Systems, presented the award to Mr Song Zhankai, a member from DRFT who accepted the award on behalf of DRFT.



The **ABU Engineering Industry Excellence Award**, which recognizes the most outstanding engineering contribution made by an individual to the broadcasting industry in the region, was awarded to Mr Yong Duk Kim of Korean Broadcasting System for his outstanding contributions to the development of UHD broadcasting.

Mr Chuck Kelly of Nautel presented the award to Mr Haeng Un Jung, Head of Transmission Planning Department at KBS, who accepted the award on behalf of Mr Yong Duk Kim.



The **ABU Broadcast Engineering Excellence Award**, which recognises contributions of an outstanding nature in broadcast engineering made by an individual in a broadcasting organisation, was awarded to Mr Sunil of Doordarshan India for his contributions to the modernisation and development of Doordarshan.

Mr Masakazu Iwaki, the ABU TC Chairman, presented the award to Mr Sunil.

## ABU Technical Review Prizes 2018

ABU Technical Review Prizes were awarded for articles contributed to the Technical Review from October 2017 to September 2018.

There were nine eligible articles for 2018 and three prizes were awarded – one Best Article Prize and two Commended article prizes.

NHK-Japan was the winner of the **Best Article Prize for 2018** for the article titled AI-Driven Smart Production. The authors were Ms Yuko Yamanouchi, Mr Jun Goto, Mr Yoshihiko Kawai, Mr Takahiro Mochizuki, Mr Shoei Sato and Mr Atsushi Imai of the NHK Science and Technology Research Laboratories. The article appeared in the July-September 2018 issue. Mr Masashi Kamei, Senior Research Engineer, NHK-STRL accepted the award on behalf of the authors.

The **First Commended Article Prize** was awarded Mr Satyajet Dash, Dy Director General (Engineering), Doordarshan-India, for the article titled Human and Technical Resource Development for Digital File-based Solution for HD/SD TV Workflow, which appeared in the April-June 2018 issue. Ms Supriya Sahu, Director-General, Doordarshan-India, accepted the award on behalf of Mr Dash.

The **Second Commended Article Prize** was awarded to Mr Mostafa Darjazi, Director of Information Technology and Systems, Planning and Finance Department, Islamic Republic of Iran Broadcasting. His article was titled Analysis of the Information Technology Maturity Level of the units in the Islamic Republic of Iran Broadcasting (IRIB) based on the ISO/IEC 20000 Standard with a Fuzzy Approach. It appeared in the October-December 2017 issue of the ABU Technical Review.

Dr Abbas Naseri Taheri, Adviser to the President of IRIB & Chairman of the Center for International Affairs/Director General of International Affairs, accepted the award on behalf of Mr Darjazi.

Mr Hamid Dehghan Nayeri, Director, International Technical Affairs, IRIB-Iran, presented the ABU Technical Review Prizes to the winners.





ABU  
ENGINEERING AWARDS  
2018



 **WHITEWAYS SYSTEMS PTE LTD**  
Broadcast System Integration | Distribution of Broadcast equipment | Consultancy Services | Maintenance

  
**nautel**  
AM/FM Radio Transmitters

THANK YOU TO  
***WHITEWAYS SYSTEMS AND  
NAUTEL***  
FOR SPONSORING THE  
**2018 ENGINEERING AWARDS**

BE A SPONSOR OF THE 2019 ENGINEERING AWARDS.  
YOU WILL GET AN OPPORTUNITY TO PRESENT THE AWARDS IN TOKYO  
IN NOVEMBER. E-mail [engineering.awards@abu.org.my](mailto:engineering.awards@abu.org.my) for more details.

# Congratulations to Rohde & Schwarz on winning the DBS 2018 Best Booth Award.



The award was introduced in 2016 and will be presented again this year.  
The winner will receive a complimentary single booth at DBS 2020.

Participants in the symposium choose the best booth by voting based on design, presentation and value provided.

The winner will be announced on the final day of the symposium at the end of the conference.



# myFreeview

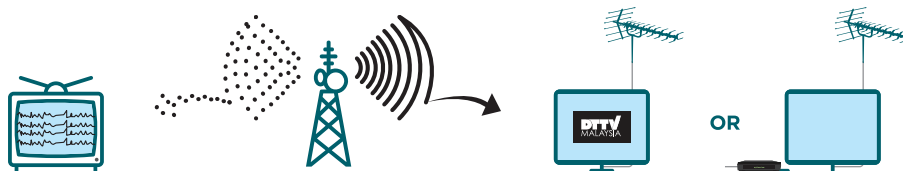
Digital Broadcast



myFreeview Digital Broadcast is brought to you by MYTV Broadcasting

## You are about to witness a new transformation in TV technology

myFreeview Digital Broadcast: a revolutionary TV experience



The way you experience television is about to change. With the nationwide shift from Analogue TV to the new myFreeview Digital Broadcast, you'll get high audio and visual quality for your free-to-air TV and radio, and therefore a much more enjoyable and immersive experience entirely.

What's so great about myFreeview Digital Broadcast?



CLEARER IMAGES



FREE SUBSCRIPTION

A variety of channels awaits you



and more channels to come

For more information, visit [myfreeview.tv](http://myfreeview.tv)

# ANNOUNCING THE NEXT ABU DIGITAL BROADCASTING SYMPOSIUM

## ABU DIGITAL BROADCASTING SYMPOSIUM 2020

2-5 MARCH 2020, KUALA LUMPUR

*Be a sponsor for DBS 2020. For more information, contact [dbs@abu.org.my](mailto:dbs@abu.org.my)  
[dbs.abu.org.my/](http://dbs.abu.org.my/)*