## ABU DIGITAL BROADCASTING SYMPOSIUM 2016

INNOVATING DIGITAL CONNECTIONS

Symposium Handbook 29 February - 3 March 2016 Hotel Istana Kuala Lumpur

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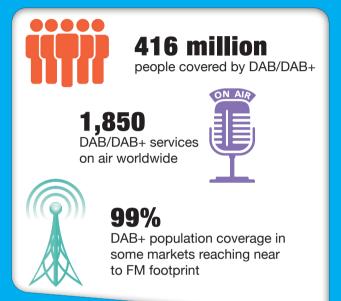


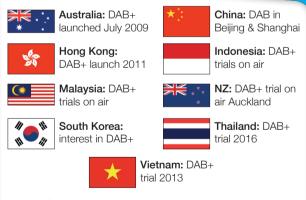
**Join us for a DAB+ workshop** 29 February, 14:00 in SAFIR-2 to learn about the progress of DAB+ and the building blocks to achieve a successful DAB+ launch in your market.

**Visit us at Booth 5** to view a wide selection of DAB+ receivers and arrange a one-to-one appointment with a DAB+ expert on all aspects of DAB+ roll-out.

### DAB+ digital radio is progressing around the world.

- DAB+ is well established in Australia
- The Asia Pacific, Arab States and South Africa have started trials
- In Europe:
  - Norway leads with Digital Switchover in 2017
  - Switzerland planning Digital Switchover in 2020-24
  - Solid progress in Germany
  - Early steps in Poland
- Over 400 DAB+ receivers available
- More than 30 car manufacturers are fitting DAB+





In Asia Pacific, 40% of Australians in major capital cities have access to a DAB+ digital radio. DAB+ launched in Hong Kong in 2011 and several markets, including Thailand, Malaysia, Indonesia and Vietnam are now planning for DAB+.

**From trial to switchover,** WorldDAB can support the transition from analogue to digital radio. Visit our booth for assistance with:

- Workshops
- On-air demonstrations
- Technical expertise
- Regulation & licencing
- Network design and roll-out
- Content production
- Receivers



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## Message from the ABU Secretary-General



I am pleased to welcome you once again to the ABU Digital Broadcasting Symposium and to this beautiful and vibrant city of Kuala Lumpur. We highly appreciate your participation in this annual event which brings together broadcasters and media players from the region and across the world.

The ABU is a non-profit, non-government, professional association of broadcasting organisations. We facilitate the development of broadcasting in the Asia-Pacific region and we also organise co-operative activities amongst our members, currently more than 278 members in 69 countries.

I am delighted to note that, with the continued support of our members and industry partners, we are yet again adding a new chapter to this annual event which has gained a good footing in the industry calendar. This twelfth edition of the annual ABU Digital Broadcasting Symposium is set to provide a productive platform for our members, broadcasters and industry players to exchange views and share experiences among likeminded colleagues.

There is no slowdown in the developments taking place in this dynamic industry, in the last year alone we have seen many new developments in the radio and television broadcast value chain. One such development is the growing strength of internet based delivery platforms and how audiences are embracing these and demanding the content they need to be delivered on multiple platforms for access with multiple devices.

This year the symposium has adopted the theme "Innovating Digital Connections" noting the rapid developments taking place in the integration of IT and media industry and how it is revolutionizing the current media space around the globe. It is evident

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66 ABU Engineering Awards 2015

that this connected environment and the growing use of connected devices is providing a huge challenge for the broadcasters with new players eyeing to enter and take advantage of this opportunity. It is important to understand that these technologies also provide forward looking broadcasters with new pathways to enhance their services and additional revenue generation streams. Technologies such as OTT and IBB platforms are very promising and many broadcasters are embracing these to improve their presence and increase their reach providing more choice of content, including premium services.

Another area of increased focused over the past year has been on improving and enhancing the audiences' experience providing a more immersive feel, dubbed as the next generation. There is tremendous focus on higher resolution with 4K and 8K Ultra HD pictures as well as high dynamic range providing a much sharper and richer picture. These developments are not only taking place in the visual area but there is growing emphasis on 3D and multichannel audio to ride alongside the picture.

The 2016 ABU Digital Broadcasting Symposium explores all these exciting prospects for the broadcasting industry to go forward with new services, more so in today's digitally connected environment.

We are happy to welcome participants from across the Asia-Pacific, Europe and North America, and I wish you a very productive and a successful conference.

### Dr Javad Mottaghi

Secretary-General Asia-Pacific Broadcasting Union

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### Conference

Nils Ahrens - UHD with HDR and HFR, creates impressive viewing experience. 2th March, 11.30am - 1.00pm

### Workshop

Eric Li Bin - Broadcast live quality monitoring and control.

Simon Roehrs - Delivering an immersive viewing experience to global audience made possible by IMF in higher dynamic range. 2th March, 2.00pm - 3.30pm

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- To promote the standardization of radiocommunication & broadcating technologies.

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### **General Secretariat**

- Organized support for radiocommunication & broadcasting areas at home and abroad
- Completion of digital broadcasting transition, support for the promotion of next-generation broadcasting industries such as UHD broadcast.
- Support for policymaking in radiocommunication & broadcasting areas
- Runs executive offices of national delegates to WRC(World Radiocommunication Conference)
- Support for policymaking and vitalization of unlicensed spectrum industries

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	Time	Dolby Technologies	Presenters
9	2.00pm - 2.45pm	Dolby 5.1 Content Production Case Studies	Vikram Joglekar
h 2016	2.45pm - 3.30pm	Object-based immersive audio for broadcast	Greg Price
March	4.15pm - 5.00pm	High Dynamic Range Video Technology- Dolby Vision	Greg Price
	5.00pm - 5.45pm	Enhanced audio for mobile OTT	Jayant Shah
	9.00am - 9.45am	HbbTV- Interactive Digital TV feature	Jerry Gui
016	9.45am - 10.30am	Dolby 5.1 Content Production Case Studies	Vikram Joglekar
March 2016	11.30am - 12.15pm	Object-based immersive audio for broadcast	Greg Price
2 M	12.15pm - 1.00pm	High Dynamic Range Video Technology- Dolby Vision	Greg Price
	2.00pm - 2.45pm	Enhanced audio for mobile OTT	Jayant Shah

# GO-->

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Asia-Pacific Broadcasting (APB) has been the voice of the broadcast and multimedia industry for the past 33 years. It brings news of groundbreaking events and features interviews with decision-makers and professionals in the industry. The publication also tracks and reviews the hottest industry developments and technology trends. Since 1998, APB has been the official publisher for the annual BroadcastAsia Show in Singapore, and a partner in other major trade events worldwide, including NAB, BIRTV, IBC, CCBN, KOBA, Inter-BEE, Broadcast India, and CASBAA Convention. With its vision and mission to become an integral part of the industry, APB has been organising CEO Roundtables, Forums & Seminars since 1999.

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# ABU Digital Broadcasting Symposium 2016 **DAB+ workshop**

Monday 29 February, 14:00 - 17:00 · SAFIR-2

Join us for a DAB+ workshop to learn about the international progress of DAB+, and the building blocks needed to achieve a successful DAB+ launch in your market.

### Workshop programme

- International developments on DAB+, with an update on the integration of DAB+ in-car
- New technical developments of DAB+ including mobile phone integration
- Building blocks for a successful roll-out of DAB+
- Norway's FM switch-off progress report
- DAB+ trial in South Africa: from trial to commercial launch

## Working session: Breaking the stalemate and moving forward

Three breakout groups will identify challenges in planning for digital migration, focusing on the following key areas:

- Spectrum and regulation
- Technical and network planning
- Content

This will be followed by a panel discussion and recommendations.

### **Speakers**

- Joan Warner, Chief Executive Officer, Commercial Radio Australia and Vice-President, WorldDAB
- Lindsay Cornell, Principal Systems Architect, BBC Digital and Chairman, WorldDAB Technical Committee
- Graham Dixon, Head of Radio, European Broadcasting Union
- Amal Punchihewa, Director, Technology, ABU
- Lynn Mansfield, Chairman, SADIBA and Executive Advisor, SABC, South Africa
- Steven Ahern, Managing Director, Ahern Media & Training Pty Ltd
- Bernie O'Neill, Project Director, WorldDAB
- Kath Brown, Head of Strategic Development, Commercial Radio Australia
- Les Sabel, Managing Director, S-Comm Technologies
- Jørn Jensen, Senior Advisor, NRK, Norway

Visit WorldDAB at **Booth 5** to arrange a one-to-one meeting with a DAB+ expert



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### Programme – DBS Workshops

Monday, 29 February

#### Venue: Safir 2 09:00-10:30 **DVB: The Future of TV** Session 1 Latest Development and Future Directions for DTT Parallel Latest updates on DTT standardization in DVB Archives Workshop Peter Siebert, Executive Director, DVB Project Office Berlian & Baiduri The Status of Mobile Broadcast Reception See pg. 22 Kazuhiro Shimizu, Project Manager, SONY WRC 2015 and the Future of DTT Simon Fell, Director of Technology & Innovation, European Broadcasting Union 10:30-11:00 **Tea Break** 11:00-13:00 Session 2 **UHD Beyond the More Pixels** The Brave New World of Immersive Audio Craig Todd, Senior Vice President and Chief Technical Officer, Dolby Laboratories Parallel Archives Workshop What you always wanted to know about HDR Berlian & Baiduri Khush Kundi, Head of Compression Solutions, APAC, Ericsson See pg. 22 How to bring UHD to a TV Near You Markus Fritz, Senior Vice President, Commercial Development & Marketing, Eutelsat 13:00-14:00 Lunch 14:00-17:30 WorldDAB DAB+ Digital Radio Workshop **Moving Forward with DAB+** 12:30-13:30 - Workshop Registration, Hotel Istana Kuala Lumpur, Safir 2 Parallel Archives Workshop 14:00-14:15 - Opening Welcome Berlian & Baiduri Joan Warner, Vice President Asia Pacific WorldDAB and CEO Commercial Radio Australia See pg. 22 14:15-14:45 - International developments Regional and Country updates WorldDAB strategic focus Vehicle manufacturer Mobile phone integration Hybrid features and function Speakers: Bernie O'Neill, Project Director & Lindsay Cornell, Technical Committee Chair, WorldDAB 14:45-15:30 - Building blocks for success • EBU toolkit – Graham Dixon, Head of Radio, EBU Norway Case study digital switch over – Jorn Jensen NRK Progress in Australia – Joan Warner, CRA South African update – Lynn Mansfield, SABC **Afternoon Break & Networking** 15:30-15:50 16:00-16:45 - Breaking the stalemate and moving forward Parallel Breakout groups will identify the common challenges in planning for digital migration. A nominated Archives Workshop spokesperson from each group will present a summary of discussions and suggestions to the workshop Berlian & Baiduri participants • Regulatory – Joan Warner, CRA & Graham Dixon, EBU See pg. 22 Technical – Lindsay Cornell and Les Sabel, WorldDAB TC Content – Steve Ahern, AMT Names represent discussion leader/s for each group Facilitators: Kath Brown & Bernie O'Neill 16:60-17:15 - Wrap up and recommendations

Questions from the participants Panel discussion with moderator Recommendations on how to move forward

**Moderator: Joan Warner** 

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### Programme – DBS Workshops Monday, 29 February 22

### Venue: Berlian & Baiduri

#### Workshop on Management and Digitisation of Audio-Video Archives for Broadcasters

#### "Preserving Heritage Archives"

The workshop will address steps necessary towards digitisation of audio and video archives, beginning with ways to further extend the life of existing analogue tapes, choosing the appropriate technology, metadata schemas and storage requirements and options. It will also look into implementation of MAM systems, its benefits in efficient content management and workflow. Many advanced broadcasters from the region will present and share their experiences in this challenging process.

09:00-09:30	Welcome Address, ABU
	Opening Keynote
09:30-10:30	Preservation Techniques and Management of Existing Archives
Parallel DVB Workshop Safir 2 See pg. 21	Managing the safeguarding your existing Archives – Best practice methods TBC Cleaning and restoration techniques Aale Raza, Director, Whiteways Systems Pte Ltd
10:30-11:00	Tea Break
11:00-12:00	Digital Solutions for Preservation and Modern Archiving Systems
Parallel DVB Workshop Safir 2 See pg. 21	The digital approach – policies, priorities and workflow Yasuhiko Iwasaki, Senior Manager, Japan Broadcasting Corporation, NHK-JapanChoosing the Right Format and Media Hiroshi Nimura, System Engineer, Engineering Administration Department, Japan Broadcasting Corporation, NHK-JapanReview of the latest technology options for archive – tape, disk & cloud Case Study: The Vatican Archives Charles Sevior, CTO EMC Emerging Technology Division
13:00-14:00	Lunch
14:00-15:30	Metadata and Management of Digital Archives
Parallel WorldDAB Safir 2 See pg. 21	Advanced Techniques in Management of Archived Content Nobu Yamashita, Senior Manager, Archives Division, Japan Broadcasting Corporation, NHK-Japan Integrating the Archive Workflow TBC
15:30-16:00	Tea Break
16:00-17:30	Case Studies: experiences and low-cost Implementations
Parallel WorldDAB Safir 2 See pg. 21	<b>Lim Soh Kwang</b> , RTB-Brunei <b>Yasuhiko Iwasaki</b> , Senior Manager Archives Division, Rights and Archives Management Center, Japan Broadcasting Corporation, NHK-Japan

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# Programme – DBS Workshops Tuesday, 1 March

### Venue: Rerlian & Raiduri

Venue: Berlian &	Baiduri	Venue: Safir 1
14:00-15:30	WORKSHOP 1	DOLBY WORKSHOP
Parallel Conference Session 3 Changing Media Business & Opportunities Mahkota 3 See pg. 27	<ul> <li>New Developments in Audio Content Production         The objective of this workshop is to expose content creators to new developments in audio content creation for radio and TV services. This workshop is for radio and TV content creators (programmers) and their technical colleagues.     </li> <li>Socialising your Sound Recordings         Facilitator: Steve Ahern, Managing Director, Ahern Media &amp; Training, Australia         Consumers no longer just consume sound in a linear form. They stop and start, rewind and time shift. They share, clip and mash up sound on social media. What are the latest trends and tricks for socialising your audio to achieve the maximum audience reach on a variety of platforms?     </li> <li>Bring your Connected devices so you can participate in the practical activities!</li> <li>Immersive Sound Creation         Facilitator: Toni Fiedler, Ton Meister Expert, Fraunhofer         For TV services, the second part of the workshop will take up entirely new concepts of sound gathering and content creation. These new methods utilize, what is known as 'object based production' where the soundscape of the scene is fully captured and faithfully reproduced at the viewers' / listeners' environment without having to place loud speakers in particular positions. The immersive effect of the sound environment is reproduced and creative sound-mixing adds to this. This opens up many exciting possibilities for content creators to produce new genres of programmes with great sound effects. Some of these methods can be used for radio content as well.     </li> </ul>	Dolby Workshop: Next         Generation Audio & Video         Experience for Broadcast &         OTT         14:00-14:45         Dolby 5.1 Content Production         Case Studies         Vikram Joglekar, Consultant,         Dolby         0bject-based Immersive Audio         for Broadcast         Greg Price, Sr Engineer, Dolby,         USA
15:30-16:15 16:15-17:30	Tea Break WORKSHOP 2	DOLBY WORKSHOP
Parallel Conference	Korea Radio Promotion Association (RAPA) Korea's UHD Broadcasting Service	DOLBY WORKSHOP
Session 4	16:15-16:20 - Introduction	Dolby Workshop: Next
Cloud Technologies in Media Mahkota 3 See pg. 27	<b>16:20-16:40 - Korea's Policy to vitalize UHD Broadcasting</b> <b>Jeong Seonguk</b> , Deputy Director, Ministry of Science, ICT and Future Planning, MSIP	Generation Audio & Video Experience for Broadcast & OTT
L]	16:40-17:00 - World's First Terrestrial UHD Broadcasting in Korea Lee Sangjin, Director, Seoul Broadcasting System	16:15-17:00 High Dynamic Range Video Technology- Dolby Vision Greg Price, Sr Engineer, Dolby,
	17:00-17:20 - Trends in UHD Broadcasting Equipment Hwang Inung, Manager, Korea Radio Promotion Association, RAPA	USA 17:00-17:45
	17:20-17:30 - Q&A	Enhanced Audio for Mobile

ΟΤΤ Jayant Shah, Director-Technical, Dolby India & SEA

# 24 Programme – DBS Workshops Wednesday, 2 March

Venue: Berlian &	& Baiduri	Venue: Safir 1
09:00-10:30	WORKSHOP 3 EMC Corporation	DOLBY WORKSHOP
Parallel Conference Session 5 Creative Content for Enhanced Experience Mahkota 3 See pg. 28	<ul> <li>Designing a Cloud-enabled Infrastructure for your ECC<sup>2</sup> Media Digital Transformation</li> <li>Many traditional media companies in Asia are grappling with the need to stay relevant and be agile in the face of competitive threats from streaming content delivery platforms such as Netflix, and other new local market entrants. But it is important to control and manage your most valuable asset – high quality content – whilst still leveraging the power and economics of Cloud computing.</li> <li>EMC Isilon has recently introduced new technology to directly integrate cloud storage into your high-bandwidth media workflow with full security. In addition, the EMC Elastic Cloud Storage solution provides highly resilient and low cost object storage that can be leveraged directly or via a service provider partner to build a secure hybrid media cloud.</li> <li>This workshop will go into depth on the requirements for a digital transformation, showing new architectures for cloud-enabled media technology infrastructure and investigating the sizing and alternative options for long-term media archives. Integrating this directly into a modern file-based workflow built on Media Asset Management applications will equip your company with the tools needed to compete in 2016 and beyond.</li> <li>The workshop will include some brief solution updates from application partners, and insight from a guest speaker who has been going through this process. You will also learn about the power of big data analytics, and how this is being used to extract greater business value and open up new revenue streams.</li> <li>Presenters: Charles Sevior, CTO, EMC Emerging Technology Division Richard Jones, File-based Solutions Specialist, Grass Valley</li> <li>Guest Speaker (details TBC)</li> </ul>	Dolby Workshop: Next Generation Audio & Video Experience for Broadcast & OT 09:00-09:45 HbbTV- Interactive Digital TV feature Jerry Gui, Regional Senior Staff Engineer, Dolby Singapore 09:45-10:30 Dolby 5.1 Content Production Case Studies Vikram Joglekar, Consultant, Dolby
10:30-11:00	Tea Break	
11:15-13:00	WORKSHOP 4 Digital Radio Mondiale	DOLBY WORKSHOP
Parallel Conference Session 6 Challenges in Media Delivery Mahkota 3 See pg. 28	DRM - For Full and Efficient Country Coverage Presenters: Alex Zink, Senior Business Development Manager Digital Radio, Fraunhofer John Abdnour, Regional Sales Manager - Asia/Pacific, Nautel Gerhard Filipp, Ampegon Radu Obreja, Marketing Director, DRM Consortium	Dolby Workshop: Next Generation Audio & Video Experience for Broadcast & OT 11:30-12:15 Object-based Immersive Audio for Broadcast Greg Price, Sr Engineer, Dolby,

12:15-13:00

USA

High Dynamic Range Video Technology-Dolby Vision Greg Price, Sr Engineer, Dolby, USA

# Programme – DBS Workshops Wednesday, 2 March

### Venue: Berlian & Baiduri

14:00-15:30	<b>WORKSHOP 5</b>	Rohde & Schwarz	DOLBY WORKSHOP
Parallel Conference Session 7		Quality Monitoring and Control ess Development Manager, Rohde & Schwarz	DOLBY.
Innovating Digital Connections Mahkota 3	possible by IMF in	nersive Viewing Experience to a Global Audience made Higher Dynamic Range legional Manager Broadcast Applications and	Dolby Workshop: Next Generation Audio & Video Experience for Broadcast & OTT
See pg. 29	Solutions, Rohde		14:00-14:45 Enhanced Audio for Mobile OTT



### **Enhanced Audio for Mobile OTT** Jayant Shah, Director-Technical, Dolby India & SEA

Venue: Safir 1

15:30-16:15	Tea Break	
16:15-17:30	WORKSHOP 6 Caton Technology	
Parallel Conference Session 8 Immersive Media Technologies Mahkota 3 See pg. 29	Open Internet IP Delivery Make Possible for Live Video Transmission and Fast Files Transferring Presenter: Wu YuTa, VP of Technology, Caton Technology Group	Caton Technology

### Friday, 4 March

### Venue: Berlian & Baiduri

09:00-16:00	Regional Workshop on Advanced Technologies for Digital Inclusion
	Sponsored by the Organisation of Islamic Cooperation
	Advances in digital technologies, including broadcasting, have improved immensely the lives of many persons with disabilities and marginalised people across the world. The workshop aims to familiarize broadcasters, media organisations, development agencies and NGOs with existing advanced broadcast technologies to provide equal accessibility to broadcast services to women, persons with disabilities, elderly and extremely poor people. It will provide examples and understanding of:
	<ul> <li>Automatic sign language generation systems developed and deployed by ABU leading members such as NHK, KBS, TRT etc.</li> </ul>
	• Speech recognition and closed captioning systems, that are normally deployed in Europe, USA, Canada and Australia.
	• Smart Village concept – employing advanced digital technologies for community capacity building even in the most remote places.
	<b>Presenters:</b> <b>Aqeel Qureshi</b> , Founder & CEO, Techbility <b>Natalia Ilieva</b> , Executive Assistant to the Secretary-General, ABU

# 26 Programme – DBS Conference Day 1

Venue: Mahkota	13
09:00-09:30	Welcome Address
OPENING SESSION	Dr Javad Mottaghi, Secretary-General, ABU
	Industry Keynote: How the Powerful Mix of Talent and Technology can Future Proof Broadcasting Joan Warner, Vice President Asia Pacific WorldDAB and CEO Commercial Radio Australia
09:30-10:30	Evolving Technologies: Towards enhancing experience
Session 1	Chairman: <b>Masakazu Iwaki</b> , Head of Human Interface Research Division, NHK Science and Technology Research Laboratories and Chairman of the ABU Technical Committee, NHK-Japan
	The industry is witnessing an enhancement of currently established standards and the emergence of new features at an accelerated pace. Some of these improvements offer a major step forward in efficient and cost-effective delivery of digital services as well as an increase in quality of experience. This session looks at the enhancements as well as the intended results from these in terms of its application and implementation.
	Digital Radio – Improving the Radio Graham Dixon, Head of Radio, European Broadcasting Union
	The More and the Better Pixels – Reinvention of TV Dr Peter Siebert, Executive Director, DVB Project Office
	<b>8K Live Production with New OBvan has started!</b> <b>Yoshitoshi KONDA</b> , Video Engineer, Outside Broadcast Engineering Division, News Technical Center, Broadcast Engineering Department, Japan Broadcasting Corporation, NHK-Japan
	Update on New DAB+ Standards and from WRC15 Lindsay Cornell, Principal Systems Architect, BBC-UK and WorldDAB TC
10:30-11:00	Tea Break
11:00-11:30	Ministerial Session
	Welcome Address Dr Javad Mottaghi, Secretary-General, Asia-Pacific Broadcasting Union
	Ministerial Address and Official Opening of Exhibition YB Datuk Seri Dr Salleh Said Keruak, Minister of Communications and Multimedia, Ministry of Communication and Multimedia, Malaysia
11:30-13:00	Beyond HD: What changes can broadcasters expect
Session 2	Chairman: <b>TBC</b>
	While HDTV brought major changes in image capture and production, it also presented the broadcasters with a complex environment filled with challenges of handling multiple formats and standards. Now the industry is facing further significant developments in imaging and production technologies of UHD and beyond. This session looks at the advances in image capture and other developments in processing and delivery of the services.
	Progress towards Next Generation Audio/Video for Broadcasting Craig Todd, Senior Vice President and Chief Technical Officer, Dolby Laboratories
	Transmission Technology for Next Generation Terrestrial Broadcasting Seo Jaehyun, Senior Researcher, Electronics and Telecommunications Research Institute (ETRI)
	<b>"Blurring the Lines" How to Maximize your Technology Initiatives</b> <b>Dennis Breckenridge</b> , Managing Director, Advanced Broadcast Solutions – Asia Pte Ltd
	DRM Digital Radio on the Move – Time for Action Alexander Zink, Senior Business Development Manager Digital Radio, Fraunhofer
	Satellite Transmission for 4K Johnny Ng, Sales Director, Sales & Business Development, AsiaSat
	Is HDR+ the most significant technology in boosting TV viewing experiences? Khush Kundi, Head of Compression Solutions, Ericsson APAC

# Programme – DBS Conference Day 1 Tuesday, 1 March

**Parallel Sessions** 

	Parallel Sessions	
13:00-14:00	Lunch	
14:00-15:30	The Changing Media Business and Opportunities	
Session 3	Chairman: <b>Dr Fintan Mc Kiernan</b> , CEO, IDEAL Systems Singapore	
Parallel Workshop 1 ABU Berlian & Baiduri	The current changing media landscape offers broadcasters the opportunities of increasing technological developments, digital services, IP delivery of content, HD and beyond. However this progress is also associated with growing challenges. Does today's scenario present itself as the opportune time for stakeholders to change their business strategies? Are the current business models applicable or is change inevitable? This session explores several established and emerging business models enabling the stakeholders to empower in setting up their business plans and identifying new revenue streams.	
See pg. 23	Digital Transformation of the Media Industry Charles Sevior, CTO, EMC Emerging Technology Division	
	Why Setting a Digital Switchover Date is Important Jørn Jensen, Senior Advisor, NRK, Norway	
	Social Media for Broadcasters: EMBRACING THE CONTENT CONSUMER Poonam Sharma, Director, MediaGuru	
	Do the Right Choices when Launching OTT Services Vidar Sandvik, Director Products, Partners and APAC Operations, CryptoGuard AB	
	Five Ways to Monetize OTT: Make OTT pay with expanded reach and better viewer engagement that reduces churn and delivers incremental profits Dave Ulmer, Sr. VP & GM, Asia Pacific, Sea Change	
	Surviving the OTT Minefield Stephen Lee, Sales Director, Conax AS	
15:30-16:15	Tea Break	
16:15-17:30	Cloud Technologies in Media	
Session 4	Session Sponsored by Korean Broadcasting System KBS	
	Chairman: Dr Ahmad Zaki Mohd Salleh, Group GM, Engineering, Television Networks, Media Prima	
Parallel Workshop 2 RAPA Berlian & Baiduri See pg. 23	How are cloud technologies making their way into the media environment where storage and bandwidth requirements are high and operations are highly time critical? How could broadcasters and media operations make use of these technologies to make their workflow more effective and efficient? This session will look at the type of applications cloud technologies are suited for media operations and how these are changing the contribution and distribution systems.	
<i>See pg. 25</i>	End-to-end Live Streaming in the Cloud Jew Kok Lim, Director of Sales, APAC, ASPERA	
	KBS World Caption Production System NCPS (Network File-based Caption Production System Taehyun Ihm, Senior Engineer, Korean Broadcasting System	
	Internet Playout for a Traditional Broadcaster Oliver Linow, Operations Engineer, Distribution Department, Deutsche Welle	
	The IABM Surveys, Tracking the Progression to Digital and onto the Cloud Peter Bruce, Director IABM APAC, IABM	
	Daily Lucky Draw Winners' announcements	

# 28 Programme – DBS Conference Day 2 Wednesday, 2 March

/enue: Mahkot	
09:00-10:30	Creative Content for Enhanced Experiences
Session 5Chairman: Abdul Hakim Amir bin Nazri, Assistant Vice President, Content Development & Prod Unit, Astro, Measat Broadcast Satellite Network SystemsParallel Workshop 3 EMC Berlian & Baiduri See pg. 24Though High Definition content is becoming the most desirable form of viewing on the large sc important to look into effective ways to present content on all the current and emerging multi- Content that fulfils the demands of the audiences is becoming critical. Creative ways of develop could be the key for survival of broadcasters. This session looks into experiences of various indu on creative approach to content creation.Parallel DOLBY WorkshopTechnology Enhances Creativity Tuan Haji Burhanuddin Md Radzi, Managing Director, Les' Copaque Production	
Safir I See pg. 24	Different Screen Sizes do not Need different Content Jaeheon Song, Executive Director, KBS Content Business, Korean Broadcasting System The Secret Success of TV formats in the Digital Age Dr Bettina Brinkmann, TV Manager, European Broadcasting Union
10:30-11:15	Tea Break
11:15-13:00	Challenges in Media Delivery
Session 6 Parallel Workshop 4 DRM Berlian & Baiduri See pg. 24	<ul> <li>Chairman: Charles Sevior, CTO, EMC Emerging Technology Division</li> <li>Advancements in processing and compression technologies have provided solutions to provide multiple HD services to viewers through DTV channels. However the quality demand and technological advancements are going for higher quality images like UHD and beyond. This provides huge challenges for delivery channels. This session looks at the different approaches and advanced technologies employed in modern delivery systems.</li> <li>Cross Platform Authentication for Radio Simon Fell, Director of Technology &amp; Innovation, EBU</li> </ul>
Parallel DOLBY Workshop Safir I See pg. 24	Development of Disaster Information System for Digital TV, Data Broadcasting and Web Contents In NHK Shunichi Sakai, Media Services Engineering Division Content Control & Engineering Center, Broadcast Engineering Department, Japan Broadcasting Corporation (NHK)UHD with HDR and HFR, creates impressive viewing experience Nils Ahrens, Area Sales Manager, Rohde & SchwarzSolving the challenges of local content insertion and distribution network optimisation Colin Prior, APAC Sales Manager, ENENSYS NetworksAfter WRC-15, is the delivery of UHD content over UHF spectrum a Realistic Option? Luc Haeberlé, Managing Director, Colibrex GmbH/LS telcom
13:00-14:00	Lunch

### Programme – DBS Conference Day 2

Wednesday, 2 March

Venue: Mahkota 3 **Parallel Sessions** 14:00-15:30 **Innovating Digital Connections** Chairman: Simon Fell, Director of Technology & Innovation, EBU Session 7 Parallel This session aims to look at the integrated environment of IP and traditional broadcast. Looking at the Workshop 5 complete broadcast chain the involvement of IT technologies in production and IP in media movement Rohde & is becoming more prevalent. But are media organisations looking at this the right way? Are broadcasters Schwarz compromising on quality in favour of costs? Berlian Supercharging Broadcast with Hybrid Connectivity & Baiduri Dr Les Sabel, Managing Director, S-Comm Technologies See pg. 25 Embracing the Power of Social Media for Broadcasters Aale Raza, Director, Whiteways Systems Pte Ltd Parallel DOLBY **Delivery over Internet and Broadcast Integration** Workshop Masaru Takechi, Senior Research Engineer, Japan Broadcasting Corporation, NHK-Japan Safir I **Bridging Quality of Experience in OTT through Precise Analytics** See pg. 25 Thomas Humeau, Business Development Director, Village Island Co Ltd 15:30-16:15 **Tea Break** 16:15-17:30 **Immersive Media Technologies** Session 8 Chairman: Dr Peter Siebert, Executive Director, DVB Project Office Higher dynamic range (HDR) providing wider and more vibrant colour pictures, higher frame rates Parallel providing more smoother viewing experiences, and further advancing multichannel audio providing Workshop 6 all new listening experiences are some of the next generation systems emerging from the industry. The experiences for audiences are evolving from typical viewing and listening to experiencing media. The Caton Technology session will look into the developments towards next generation media systems and how they enhance Berlian audiences viewing experiences. & Baiduri Redefining TV Viewing Experience – High Dynamic Range (HDR) & Wide Color Gamut (WCG) See pg. 25 Femin John, Technical Director, ATEME Monitoring and Authoring of 3D Immersive Next Generation Audio Formats Peter Poers, Managing Director, Jünger Audio GmbH Bevond 4K, Development Toward 2020 Naoki Kashimura, Director of the Board, Managing Director, Product Strategy & Marketing Div, R & D, Ikegami Tsushinki Co Ltd MPEG xHE-AAC - The Latest Innovation in Audio for Digital Radio and Web Streaming Alexander Zink, Senior Business Development Manager Digital Radio, Fraunhofer **Daily Lucky Draw Winners' announcements** 

# 30 Programme – DBS Conference Day 3 Thursday, 3 March

### Venue: Mahkota 3

09:00-10:30	Media Management and Workflow enhancements
Session 9	Chairman: <b>TBC</b> With media contribution and distribution systems increasingly employing IP platforms the broadcast and production workflows are moving quickly to expand its functionality. With new and advanced equipment ready to work in the IP domain, there is a huge drive to further enhance productivity and efficiency of workflows within the media environment. The session will look into how key technologies can be used within broadcast and media environments to leverage the benefits of file-based workflow and automation. New Generation Scheduling Tools Open Up VOD Ad Revenue Streams to Broadcasters Michel Beke, SVP Product Strategy, MediaGeniX NG Large-Scale Archive Digitization: Commercial Benefits, Operational Advantages and Challenges Michel Merten, Co-CEO of Memnon on behalf of SONY File Based Audio Processing - what we did with tapes now needs to be done with files MC Patel, CEO, Emotion Systems
	Storage, Protection and Preservation for the Long-term: Real World Challenges and Solutions Paul Jones, Sales Director, Digital Media Solutions, Oracle
10:30-11:15	Tea Break
11:15-13:00	Session 10: Industry Debate Panel "Digital Radio for the Future"
	Is digital radio industry moving slower in the Asia-Pacific region compared to others? How can broadcasters move forward with implementation? What are the opportunities and does it outweigh the challenges? How does the roadmap for digital radio implementation look in the region? The Panel will discuss on the future of radio going digital. Moderator: <b>TBC</b> <b>Panellists:</b> Joan Warner, Vice President Asia Pacific WorldDAB and CEO Commercial Radio Australia Simon Fell, Director of Technology & Innovation, EBU Masakazu Iwaki, Head of Human Interface Research Division, Science and Technology Research Laboratories and Chairman of the ABU Technical Committee, NHK-Japan Sunarya Ruslan, Member of the Board of Supervisory, RRI-Indonesia Alexander Zink, Senior Business Development Manager Digital Radio, Fraunhofer
13:00-14:00	Lunch
14:00-15:30	Advanced Solutions for Inclusive Broadcasting
Session 11	Session Sponsored by Organisation of the Islamic Cooperation Chairman: Hiroshi Kawamura, Research Advisor, National Rehabilitation Center for Persons with Disabilities Research Institute, Vice President, Assistive Technology Development Organization, President, DAISY Consortium
	Automatic Sign Language Animation System for Weather News Makiko Azuma, Research Engineer, Human Interface Research Division, NHK Science & Technology Research Laboratories, Japan Broadcasting Corporation, NHK-Japan Smart Village of the Future
	Natalia Ilieva, Executive Assistant to the Secretary General, ABU         File-based Closed Captioning System without Captioning Delay
	Yunhyoung Kim, Research Engineer, Technical Research Institute, Korean Broadcasting System
	A Real-time Automatic Captioning System with High Efficiency Shoei SATO, Senior Research Engineer, Human Interface Research Division, NHK Science & Technology Research Laboratories, Japan Broadcasting Corporation, NHK-Japan

## Programme – DBS Conference Day 3

Thursday, 3 Ma

15:30-16:00 16:00-17:15

Session 12

irch	
	Tea Break
	Towards Digital and Alternate Delivery Platforms in Broadcast
	Chairman: <b>TBC</b>
	Going digital is the way forward and few have successfully completed the transition. Most of the broadcasters in the region are moving ahead with their plans. This is not the only challenge faced by broadcasters, the growth of media delivery over IP and its demand has given broadcasters a new avenue to grow their services. Some broadcasters have launched their own dedicated OTT portals. Many broadcasters have explored the new media platforms and implementing these technologies can help

increase the broadcaster's reach, brand loyalty and at the same time provide an enhanced experience for the audience. This session will explore the challenges in going digital and the possibilities and

Face the Future, Accept the Changes Helmut Jung, Channel Manager, Dimetis GmbH

Quality control and Certification of reception devices Tatjana Medic, Chief Commercial Officer, Funke Digital TV

opportunities OTT and IBB technologies could provide.

**IBB: Influence on TV Design** Dr Leon Mun, W Y, Head of Content Delivery Department, Sony R&D Centre, Malaysia

TV anywhere, anytime, for all Charles Disneur, Director Commercial Development, Marketing – APAC, Eutelsat

**Daily Lucky Draw Winners' announcements** 

Announcement of the Best Booth Award

Closing



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### 32 Speakers



### Dr Javad Mottaghi Secretary-General, Asia-Pacific Broadcasting Union

Dr Javad Mottaghi is the Secretary-General of the ABU. Before joining the ABU, he was Director of the AIBD for 12 years. He has 35 years of national

and international broadcasting experience in news and programming.

Dr Mottaghi holds a PhD Degree from the University of Teesside in England, a Master Degree in Management and a Bachelor's degree in Mechanical Engineering from Tehran Sharif University of Technology.

Dr Mottaghi won the Elizabeth R Award for Exceptional Contribution to Public Service Broadcasting. He is a member of the board for the World Radio & Television Council, Associate member of The International Academy of Television Arts & Sciences in New York and a member of The International Academy of Television and Radio in Russia. Dr Mottaghi also received a Life Time Award in 2010 for his 12 years of achievement in AIBD.

He was the Director of Radio and TV Sports Department of IRIB for 18 years. His other positions were Director International Relations, TV Social Department, News Department as well as Advisor to the President of IRIB on Sports Coverage.

Dr Mottaghi was Adviser to the Minister of Culture and Tourism, the Executive Commissioner, Qeshm Free Zone and Vice Minister of Iran for Sports and Federations from 1989-1992.



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

Joan Warner is the Chief Executive Officer of Commercial Radio Australia (CRA) representing Australian commercial radio broadcasters. Ms

Warner is also Vice President of WorldDAB Asia Pacific. In her role as CEO of CRA Ms Warner oversees the whole of industry marketing & brand campaign campaign, the co-regulatory Radio Codes of Practice, audience measurement survey contracts and industry copyright agreements. Ms Warner is responsible for negotiations across a range of regulatory and legislative issues with regulators and directly with Government Ministers. She is also responsible for the annual National Commercial Radio Conference, Siren Creative Awards and Australian Commercial Radio Awards. Ms Warner coordinated and managed the planning, rollout and implementation of DAB+ digital radio in the five metropolitan capitals covering 64% of the Australian population and continues to manage strategy development for the DAB+ implementation into regional Australia.

As Vice President of World DAB Ms Warner works with regulators & broadcasters to advance and assist with the rollout of DAB+ technology to improve radio services to listeners across the Asia Pacific region.

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.



#### Charles Sevior CTO EMC Emerging Technology Division

Charles Sevior is CTO for Isilon, a part of the Emerging Technology Division of EMC<sup>2</sup>. With a strong background in the media sector, he also provides focus on solutions for Analytics, Scientific, Video

Surveillance, Resources, Enterprise and other sectors across the Asia-Pacific & Japan region. Charles has 30 years of engineering experience.



### 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 joining Enensys, Colin was Director of International Sales at Strategy & Technology Limited.



Shoei Sato Senior Research Engineer, Human Interface Research Division, NHK Science & Technology Research Laboratories, Japan Broadcasting Corporation, NHK-Japan

Shoei Sato he has been with NHK Science and Technology Research Laboratories since 1995 and is engaged in research on the digital satellite broadcasting system. He is a senior research engineer in the human interface research division and is engaged in speech recognition research for broadcasting. He contributed to the development of a live closed-captioning system using speech recognition.



#### Michel Beke SVP Product Strategy, MediaGeniX NG

Michel is co-founder of MediaGeniX. Designing robust media solutions that enable broadcasters to optimally run and develop their media business is Michel's passion. Active in the

broadcasting business since 1993, Michel evolved from development through analysis to business consulting as the business evolved from single channel linear TV to multi-channel linear and on-demand services.



### Makiko Azuma Research Engineer, Human Interface Research Division, Science & Technology Research Laboratories, Japan

**Broadcasting Corporation, NHK-Japan** Makiko Azuma received B.E. and M.E.

degrees in Precision Engineering from

the University of Tokyo in 2008 and 2010 respectively. After her graduation, she joined NHK and worked in NHK Sendai from 2010 to 2013. Since 2013, she has been working in NHKSTRL and is currently working on automatic sign language animation generation.



Yoshitoshi KONDA Video Engineer, Outside Broadcast Engineering Division, News Technical Center, Broadcast Engineering Department, Japan Broadcasting Corporation, NHK-Japan

Yoshitoshi Konda belongs to the Outside Broadcast Engineering Division in the Broadcast Engineering Department. He received an M.S.degree in Electrical and Electronic Engineering from Gunma University. He joined NHK in 2001 and has mainly been engaged in program production and live broadcast. He served as system engineer of outside broadcasting for the Sochi, London and Beijing Olympics.



### Oliver Linow

**Technische Distribution, Deutsche Welle** Oliver Linow joined Deutsche Welle in 1998. 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. Since 2012 he has managed the worldwide DW signal monitoring network and headed the quality assessment department.



### Stephen Lee Sales Director, Conax AS

Stephen Lee joined Conax AS in 2009 to focus primarily on content security. He has since been actively involved in broadcasting trends with a focus on content security for traditional

broadcast, Hybrid TV, OTT and IPTV. Before joining Conax AS, Stephen worked for SingTel where he handled the South East and North Asia markets.



#### Jaya Mahajan Consultant, Factual for Asia

Jaya is a consultant, award winning producer and writer. She has created content for some of the biggest brands in the Asian media industry for nearly two decades. She works with broadcasters

and production companies across Asia towards program development, scriptwriting and production planning for factual programs. Trans media projects and digital journalism are her current areas of interest.



#### Sanjay Salil Managing Director, MediaGuru

Sanjay Salil is a media entrepreneur with more than 22 years of experience in consulting some of the world's leading broadcasters and media companies on technology, content and business

strategy. As Managing Director, Sanjay has led MediaGuru through a decade of success, leading the organization in a competitive, complex market and driving a significant growth over the years.

## <sup>34</sup> Speakers



### Poonam Sharma Director, MediaGuru

Poonam Sharma is a well-known face in the Asian media and broadcast fraternity and has more than 19 years of industry experience. As Director - South Asia, Poonam leads business development

and key account management for MediaGuru in Southeast Asia. Prior to joining MediaGuru, Poonam was an integral part of the India Today Group.



### Peter Bruce Director APAC, IABM

Peter Bruce is a 25-year-plus veteran of the broadcast and media industry. His career started at Digital Visions, Austria. Peter has worked with innovative, pioneering companies such as AMPEX,

Sony Broadcast and BTS)/Philips Broadcast in the APAC region. Peter is now working for the IABM as Director APAC, establishing the IABM APAC regional office.



### Jaeheon Song Executive Director of KBS Content Business, Korean Broadcasting System, KBS-Korea

Mr Song joined KBS as a TV producer in 1987 and has since held key positions including foreign correspondent in

Paris and Chief Producer of current affairs programs and documentaries. As Executive Director of KBS Content Business, Mr Song is in charge of KBS World channel, content business strategy, and new media platform business.



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

Steve Ahern is an internationally recognised broadcast trainer and consultant. He is the author of the text book Making Radio, and the founder

of the radioinfo website. He was previously Director of Radio at the Australian Film Television & Radio School and a senior executive at the Australian Broadcasting Corporation.



#### Jew Kok Lim Director of Sales, APAC

Jew Kok Lim is currently responsible for the Aspera business in the Asia-Pacific region. He held various positions in high technology companies, including Autodesk, Avid and Quantum, over

the last 20 years. He has worked primarily on providing solutions in the media sector. In the past three years he has been closely involved in helping companies solve Big Data storage, management, transport and collaboration problems.



#### Dennis Breckenridge Managing Director, Advanced Broadcast Solutions – Asia Pte Ltd

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.



### Aale Raza Managing Director, Whiteways Systems Pte Ltd

Aale is the founder and Managing Director of Whiteways Systems Pte Ltd. 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. Prior to founding Whiteways, Aale was Head, South Asia and Emerging Markets, for Kit Digital Inc.



#### Graham Dixon Head of Radio, European Broadcasting Union

Since 2015, Graham Dixon has been Head of Radio at the European Broadcasting Union in Geneva. After holding production and editorial

positions within BBC Radio, Graham was Managing Editor of BBC Radio 3 for ten years. While at the BBC, he played a prominent role in EBU activities, chairing the Music Group and the Euroradio Users Group.



#### Nils Ahrens Area Sales Manager, Rohde & Schwarz

Nils has been working for Rohde & Schwarz for more than 11 years, holding project management positions in the Middle East for their Radio Communication Business Unit as well as

Head of Sales & Marketing for the Broadcast Business Unit in Asia Pacific. Since 2012 he has worked out of Australia looking after Australia, NZ, ASEAN and Pacific Islands.



#### Simon Roehrs Regional Manager Broadcast Applications and Solutions, Rohde & Schwarz

After 10 years of development, Simon Roehrs worked as a solutions architect and service engineer being responsible

for the APAC region. During this time he gained knowledge in different markets, digital media, post production and broadcast studio workflows. He learned how to create a tailored customer solution and perform installations as well.



Shunichi Sakai Engineer, Media Services Engineering Division Content Control & Engineering Center, Broadcast Engineering Department, Japan Broadcasting Corporation, NHK-Japan

Shunichi Sakai joined NHK in Tokyo in 2005. Since 2012, he has engaged in development and operation management of the disaster information system for digital TV, data broadcasting and web contents at Content Control & Engineering Center Media Services Engineering Division.



#### Femin John

#### **Technical Account Director APAC, ATEME**

Femin John is ATEME's Technical Account Director APAC. Femin has been associated with the Broadcast and Cable TV industry for more than a decade. His background includes

extensive experience with Broadcasting, DTH, DTT, Cable TV & CA-DRM businesses and technologies. He holds a Bachelor of Engineering degree in Electronics and Communication and a MBA in International Business from the Indian Institute of Foreign Trade.



#### Eric Li Bin Regional Manager, Regional Headquarters Singapore Pte Ltd, Rohde & Schwarz

Eric Li Bin is responsible for the business development of Rohde & Schwarz in the ASEAN market, including Transmitter,

Headend, Test and Measurement, and Studio solutions. He has over 12 years' experience in the broadcast industry, and expertise in a wide range of areas. He is actively involved in the DVB-T2 roll out in the ASEAN region.



#### Jørn Erik Jensen

Senior Advisor, NRK-Norway, WorldDAB

Jørn Jensen was President of WorldDMB for four years from 2009-2013. Jørn has more than 20 years of experience in radio broadcasting. He has been working at Norway's public broadcaster

NRK since 1986, after a 10 year career as a musician. He is currently Chief Advisor to the Director of Distribution, dealing with the strategy for NRK's digital future on all NRK platforms.



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

Bernie 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. 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.



#### Michel Merten Co-CEO, Memnon

Memnon is co-managed by its founder, Michel Merten. After 10 years with Exxon, he joined a Belgian SME, Musica Numeris, dedicated to classical music recording/postproduction. In 2004,

Michel changed the name of the company to Memnon Archiving Services, and focused the business exclusively on audio-visual digitisation. Michel represents Memnon in the IASA Technical Committee.

### 36 Speakers



#### Lynn Mansfield Chairman, Southern African Digital Broadcasting Association (SADIBA) and Executive Advisor, South African Broadcasting Corporation (SABC)

Lynn Mansfield joined the SABC in 1974. His roles ranged from maintenance to

design, to project management, strategic planning, and policy and regulatory environment. Lynn's last position at the SABC was General Manager of Distribution. He has served on various broadcast industry bodies and was the Chairperson of both SADIBA and the NAB Technical Committees.



#### Simon Fell Director of Technology & Innovation, European Broadcasting Union

Simon Fell has been Director of Technology & Innovation for the EBU since 2013. He has more than 35 years' experience in senior broadcasting

technology roles, including at British broadcaster ITV. Before joining the EBU Mr Fell was Chairman of the Technical Council at the Digital Television Group, the industry association for digital television in the UK.



#### Craig Todd Senior Vice President and Chief Technical Officer, Dolby Laboratories

Craig Todd has been with Dolby since 1977. With more than 40 years of experience, he has been involved in many state-of-the art entertainment

technologies. Craig led the development of Dolby Digital and was heavily involved in the effort to set the Digital TV standard for the U.S. He is considered an expert in many areas of audio/video technology.



#### Peter Siebert Executive Director, DVB Proiect Office

Peter Siebert is the Executive Director of the DVB Project Office in Geneva, where he is responsible for all operational aspects of the DVB organization. His professional career spans all aspects

of audio-video technology such as video transmission over telecommunication networks, satellite and IPTV networks. He holds several patents for various aspects of audio-visual data transmission.

#### **Peter Poers**



#### Managing Director, Jünger Audio GmbH

Peter Poers began his career at the East-German Record Company in 1988. From 1990 to 1994 he worked with Sony Broadcast & Communications for Professional Audio. In 1995 Peter joined

Jünger Audio-Studiotechnik GmbH. He has managed the company for about 10 years. He is a member of EBU PLOUD and also ATSC TG1.



#### Naoki Kashimura Director of the Board, Ikegami

Naoki Kashimura joined Ikegami in 1983. For more than 30 years, he has participated in the development of broadcast cameras and its video processing ASIC. Over the last decade,

he has been taking an active part in product strategy, marketing and global business promotion for Ikegami.



#### Dave Ulmer Sr VP & GM, Asia Pacific, Sea Change International

Mr. Ulmer has a broad range of industry experience in executive management positions with television service providers, wireless operators, and

global CE manufacturers. He was Managing Director, Digital Home, and VP, Global Cloud Business, for SingTel, Southeast Asia's largest telecommunications company. Ulmer previously led digital media transformations at LG Electronics as Global VP of Content Services; Motorola Mobility as Senior Director, Mobile Media & Entertainment; and as the original founder of Roxio.



#### Vidar Sandvik Director of Products, Partners and APAC Operations, CryptoGuard

Vidar Sandvik has more than 20 years of experience in content distribution through two ways broadband and one way broadcast networks. Vidar joined

CryptoGuard as Director of Products, Partners and APAC operations in September 2015. CryptoGuard is a successful European vendor of content protection for both Broadcast and OTT services.



#### Nobu Yamashita Senior Manager, Archives Division, Japan Broadcasting Corporation, NHK-Japan

Nobu Yamashita has worked for NHK since 1984. He has produced numerous television documentaries, mainly on

modern Japanese history and fine arts. For the past six years, he has been a member of NHK's archive division and in charge of media preservation and rights management. He is also responsible for making NHK's enormous footage available to the public and academics.



#### Maseru Takechi

Senior Research Engineer, Integrated Broadcast-Broadband Systems Research Division, Science & Technology Research Laboratories, Japan Broadcasting Corporation, NHK-Japan

Mr Takechi joined NHK in 1990. Since then, he has been studying many areas of broadcasting technologies at the Science and Technology Research Laboratories. His current major interest is middleware and architecture of interactive TV. In addition, he actively participates in standardization for both domestic and international standards. He is taking a lead in creating mono-media coding for interactivity.



#### Lindsay Cornell Principal Systems Architect, British Broadcasting Corporation

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 FM51, dealing with spectrum issues for programme making, and as Chairman of the World DAB and DRM Technical Committees.



#### 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 Owner and Managing Director, S Comm Technologies Pty Ltd

Les has over 30 years of technical expertise in communications systems, including broadcast digital radio, mobile communications, wireless

broadband and satellite communications. Les now works internationally on all aspects of planning, trialling, project management and the continued development of DAB+ digital radio and hybrid functionality. He founded S-Comm Technologies Pty Ltd in 2008.



#### Bettina Brinkmann TV Manager, European Broadcasting Union

Dr Bettina Brinkmann started to work at the European Broadcasting Union in Geneva, Switzerland around 10 years ago as Head of Formats before being in

charge also for European co-productions. She has over 20 years of experience in the media business – both for feature films and TV – in the field of development, production, financing, planning, acquisition and distribution.



#### Markus Fritz Senior Vice President, Commercial Development & Marketing, Eutelsat

Markus joined Eutelsat in June 2013. As Senior Vice President, Commercial Development & Marketing, his responsibilities include the international

development of Eutelsat's commercial strategy, including market development and research, business intelligence, product management and pricing as well as marketing communications. Markus is a leading expert in the global digital broadcasting business and telecommunication industry.

### <sup>38</sup> Speakers



#### **Khush Kundi Head of Compression Solutions, APAC, Ericsson** Khush heads up all Bu

Khush heads up all Business Development and Technical Pre-sales activities for Ericsson's Compression Business across APAC. Working in the

industry for almost a decade, he has worked with some of the world's largest broadcasters, operators and services providers in Europe and Asia in providing a range of services including consulting, business development and strategic planning.



#### Masakazu Iwaki Head of Human Interface Research Division, Science and Technology Research Laboratories, Japan

Broadcasting Corporation, NHK-Japan

Masakazu Iwaki was appointed to his present position in June 2015. He

oversees research and development of human interface technologies to improve media accessibility. Prior to his appointment, Mr Iwaki was senior manager of the public relations and planning division in the STRL for three years. He has been the Chairman of the ABU Technical Committee since 2014.



#### Yunhyoung Kim Research Engineer, Technical Research Institute, Korean Broadcasting System, KBS-Korea

Yunhyoung Kim has held his current position since 2007. He has participated in standardizing several DTV standards

such as Open Hybrid TV (OHTV; hybrid broadcast broadband TV standard in Korea) and Assistive Services for the Vision and Hearing Impaired. His research interests are efficient metadata management and content delivery via both the terrestrial broadcasting network and the Internet.



#### Taehyun Ihm Senior Engineer, Korean Broadcasting System, KBS-Korea

Taehyun Ihm has worked at the Production Facility in KBS since 2012. He participated in the Video Archive System and KBS America NPS (Network

file based Production System). He also designed KBS WORLD NCPS (Network Caption Production System) architecture and now plays a role as a project manager of the KBS Cloud based Production System.



#### MC Patel CEO, Emotion Systems

MC is an entrepreneur in the broadcast and post production industry. He was a driving force behind Abekas in the 1980s as well as Alpha Image, Dynatech, Discreet and Post Impressions in the

'90s. After selling Post Impressions to Snell & Wilcox he has provided business development consultancy to small, high tech companies in the film and TV industry.



#### Luc Haeberlé, Managing Director, Colibrex GmbH/ LS telcom

Luc Haeberlé has over 20 years' experience in the broadcasting field. He has been involved in various projects related to the introduction of digital

broadcasting. In 2013 he joined the German LS telcom group, in charge of developing the new subsidiary Colibrex with specialized services in the areas of implementation, testing, operation and maintenance of wireless networks.



#### Toni Fiedler Director Marketing and Business Development APAC Fraunhofer IIS Audio & Multimedia

Toni Fiedler is the founder and General Manager of Pleasant Audio Ltd. and represents Fraunhofer IIS' Audio &

Multimedia division in Greater China and APAC. His career includes several senior business development roles in Fraunhofer IIS, Dolby and Coding Technologies. Prior to this he co-founded one of the first DVD pre-mastering facilities in Europe in 1996.



Yasuhiko Iwasaki Senior Manager Archives Division, Rights and Archives Management Center, Japan Broadcasting Corporation, NHK-Japan

Yasuhiko Iwasaki started his career as Producer/Program Director at NHK at

1984. In 2008, he became Senior Manager of the NHK Archives and he was in charge of the information design of the web service. From 2012, as a key member of the company-wide project, he led the conversion to a digital workflow



#### Hiroshi Nimura System Engineer, Engineering Administration Department, Japan Broadcasting Corporation, NHK-Japan Hiroshi Nimura joined NHK in 2000. He

worked in the News and Multimedia Department as an engineer at the NHK

Nagoya broadcast station. In 2005 he moved to NHK Tokyo as an engineer in the Video Center. Since 2010 he has been engaged in the development of file-based archive systems in NHK's Engineering Administration Department.



#### Greg Price Sr Engineer, Dolby USA

Greg Price is a Senior Engineer for Dolby based in San Francisco. He is responsible for supporting broadcast and postproductions facilities in North and South America as well as the Asia Pacific

region. He works closely with broadcasters such as HBO, Starz, Comcast and AT&T to support the implementation continuing use and delivery of high quality Dolby platforms.



#### Kazuhiro Shimizu Project Manager, SONY

Kazuhiro Shimizu has been leading the development of tuner LSIs of Sony for more than 10 years. Sony is a worldwide tuner LSI supplier and he has extensive knowledge of global,

digital broadcast technology. He is the project manager responsible for Sony's low power-consumption DVB-T2 tuner development which brings the mobile television reception closer.



#### Vikram Joglekar Consultant, Dolby India

Vikram Joglekar started with Cinema Audio working as a Dolby Sound Consultant. He was involved in the transition from mono to surround sound in cinema in India that took place

in the 90s. He continued to work for Dolby in Italy for 12 years. Since 2011 he has been back in India working with various broadcast houses facilitating surround content production.



#### Burhanuddin Md Radzi Managing Director, Les' Copaque Production

Mr Burhanuddin joined the animation industry in 2005, establishing the company Les' Copaque Production Sdn Bhd. Through the company he

has successfully positioned Malaysia on the map of the global animation industry. The company has won more than 40 awards. Earlier, Mr Burhanuddin had a long and successful career in the petroleum industry.



#### Jerry Gui Regional Senior Staff Engineer, Dolby Singapore

As the Regional Senior Staff Engineer at Dolby Singapore, Jerry works closely with the free-to-air broadcasters and Pay TV Operators in South East Asia to

enable Dolby technologies with proper deployment and implementation. Jerry held the position of Principal Engineer at MediaCorp Singapore prior to joining Dolby Singapore in Year 2011.



#### Fintan Mc Kiernan CEO, Ideal Systems Singapore

Fintan joined Ideal System Group in 2011 to establish a S.E.A. hub office in Singapore, which now includes offices in Kuala Lumpur and Jakarta. Ideal (SEA) has delivered broadcast projects

to operators including Sony Pictures, Fox Sports, Astro and Globecast, Encompass, SingTel, Brand New Media and Mediacorp. In 2014 Fintan launched SoftCast Technologies, a software based broadcast product ecosystem for the Asia market.



#### Tatjana Medic Chief Commercial Officer, Funke Digital TV

As Chief Commercial Officer and Commercial Director at Funke Digital TV, Tatjana Medic is involved in all global international digital television

projects. She is a strong believer in the future of digital terrestrial television, and the development of smart digital terrestrial solutions form a major part of her focus in Funke. She holds an MBA in International Business from the Netherlands.

### <sup>40</sup> Speakers



#### Johnny Ng Sales Director, Sales and Business Development , Asia Satellite Telecommunications Company Limited

Johnny Ng is AsiaSat's Sales Director. He joined AsiaSat in July 2015 and is responsible for sales activities in the

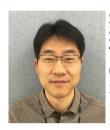
Asia region, including Hong Kong, Malaysia, Philippines and Singapore in the company. He has been in the media broadcast industry for over 15 years, in various positions in engineering, sales and business development.



#### Richard Jones Strategic account manager, Grass Valley, Asia

Richard Jones took on several roles at MTV Europe and later at Omnibus. With the acquisition of Omnibus by Miranda Technologies Richard, he moved into a

presales/system design role of the first integrated playout platform ITX, deploying multiple very large deployments globally. With the merger of Miranda and GV Richard is now the Strategic account manager for GV in Asia.



#### Seo Jaehyun Senior Researcher, Electronics and Telecommunications Research Institute (ETRI)

Seo Jaehyun has been with the Broadcasting System Department, Electronics and Telecommunications

Research Institute (ETRI), Daejeon, Korea since 2001, developing advanced transmission and reception technology for terrestrial digital television. His research interests are digital signal processing in particular, signal processing for digital television and digital communications. He holds M.S. and Ph.D. degrees from Kyungpook National University in Daegu, Korea.



#### Lee Sangjin Director, Seoul Broadcasting System (SBS)

Lee Sangjin recently joined SBS, a terrestrial TV broadcast company, as director in the UHD planning and Policy team. His research interests

are signal processing in multicarrier system, digital broadcasting systems such as 3DTV and UHDTV, and mobile broadcasting systems. Earlier he worked at Korea Communications Agency as a chief researcher in the R&D planning team for next generation broadcasting.



#### Hwang Inung Manager, Korea Radio Promotion Association (RAPA)

Hwang Inung is dedicated to Korea's international exchanges in the fields of radiocommunications and broadcasting at RAPA's Industry Strategy Department.

Major responsibilities include in-depth research on broadcasting policies and present conditions in international society and liaison with international organizations including the ABU, AIBD and ITU.



#### Brian Campanotti Global Director of Business Development, Oracle Digital Media Solutions

For the past decade, Brian Campanotti has lead innovation and strategy for Front Porch Digital as CTO, leading

to their acquisition by Oracle in 2014. He now heads a global business development team at Oracle focused on advanced Content Storage Management solutions, archiving and long-term preservation serving many verticals. Brian began his career at the Canadian Broadcasting Corporation.



#### Leon Mun, W.Y. Head of Content Delivery Department, Sony R&D Centre, Malaysia

Dr Leon Mun leads the software development and certification process of Sony Bravia Televisions for OTT and IBB in Asian countries. This gives him

a unique TV manufacturer's perspective of the OTT and IBB ecosystem especially in conformance testing, interoperability and end-user feedback. His qualifications include a Ph.D. in broadcast semiconductor design and a B.Eng (Hons) in electronics & computing.



#### Tes John Abdnour Regional Sales Manager, Asia Pacific, Nautel

John Abdnour is responsible for the organization of the sale of Nautel AM / FM / TV transmitters in this region. He is in regular attendance at national and

regional broadcast conventions, seminars and meetings. He is a veteran of the radio broadcast industry having worked in radio for nearly half a century.



#### Gerhard Filipp Area Sales Manager, Ampegon

Gerhard Filipp has been Area Sales Manager Africa for Ampegon since 1996. In 2016 his sales responsibilities were extended to the Asian market. Mr Filipp has long been connected to the

African market, overseeing broadcasting activities and leading turn-key projects like SW Centre Lugbe for Voice of Nigeria. He has also worked to implement the DRM Standard in Africa.



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

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. Dr Zaki has been actively involved with the national committees for the development of Digital TV standards in Malaysia. He has served on various committees under the Malaysian Communications and Multimedia Commission.



#### Sales Director, Digital Media Solutions

As Sales Director for Oracle Digital Media Solutions, Paul Jones is responsible for Asia Pacific sales of the DIVA Content Storage Management solutions, for onpremise, cloud and hybrid architectures

as used by leading media companies. Paul has worked in the Asia-Pacific region for over 25 years and is also chair of the IABM Regional Council.



#### Jayant Shah Director-Technical, Dolby India & SEA

Jayant has been involved with the satellite and cable TV industry in India since its inception in the early 90s. He has been with Dolby Laboratories in the capacity of Head of Systems Engineering

for India since early 2010 and has gained extensive experience in the areas of broadcast audio production including live sporting events and post-produced shows.



#### Alexander Zink Senior Business Development Manager Digital Radio, Fraunhofer

Since 2000, Alexander Zink has worked at the Fraunhofer Institute for Integrated Circuits in Germany as Senior Business Development Manager

for Digital Radio. From 2001 on, he has focused on the professional broadcast systems "Fraunhofer DRM and DAB ContentServer". Alexander is also project director for Journaline, an interactive text based information system for digital radio.



#### Wu YuTa VP of Technology, Caton Technology Group

Mr Wu is a seasoned broadcast professional with 25 Years' experience in product design & development, sales and marketing. He is highly skillful and

knowledgeable in both the Video Baseband and MPEG compression domain. He has vast hand-on experience in video over IP streaming over Open Internet based on Caton's Technology and product solutions.



#### Helmut Jung Channel Manager, Dimetis GmbH

Helmut Jung is International Channel Manager at Dimetis, well-versed on multivendor network management and provisioning software focused on media transport. He has been working

on strategic, long term relationships and has increased integrated global player technology providers across all Dimetis Broadcast Operating Support Systems (BOSS) product lines in high numbers.



#### Jeong Seonguk Deputy Director, Ministry of Science, ICT and Future Planning, MSIP

Jeong seonguk, who's a member of MSIP, is mainly in charge of development of next generation broadcasting technology and policy for promoting

broadcasting industry. He is currently working on the policy project for establishing UHD terrestrial broadcasting system.

### <sup>42</sup> Speakers



#### Sunarya Ruslan Chairperson of Supervisory Board, Radio Republik Indonesia

Sunarya Ruslan is Chairperson of RRI's Supervisory Board. He is also a member of the ABU Technical Bureau and is Honorary Vice Chairman of the

ABU Technical Committee. Mr Sunarya won the ABU Broadcast Engineering Excellence Award in 2014 for his outstanding contribution to the development of RRI and broadcasting regulations in Indonesia.



#### Thomas Humeau Business Development Director, Village Island

Thomas Humeau has been involved in the Village Island growth since its early stages, and has a mix of technical and business achievement in the company.

Thomas has continuously developed the Village Island network of International partners. He has 17 years of experience in the broadcast and digital TV market.



#### Aqeel Qureshi Founder and CEO, Techbility

Aqeel Qureshi is the Founder and CEO of Techbility, a company that specializes in accessible website development, web applications, documents, research and mobile applications. He is an editor

of the GAATES Global Accessibility News (GAN) which has more than 16,000 subscribers globally. Aqeel is an internationally recognized accessibility expert and an advocate for the rights of persons with disabilities.



#### Radu P Obreja Marketing Director DRM Consortium

Radu P. Obreja is the Marketing Director of the DRM Consortium. He has extensive experience in Business Development, Marketing and PR having

worked in several industries for more than 30 years.

Radu is a member of the DRM Steering Board and is actively promoting the roll-out of the DRM standard in Asian, African and European countries.



Hiroshi Kawamura Research Advisor, National Rehabilitation Center for Persons with Disabilities Research Institute Vice President, Assistive Technology Development Organization President, DAISY Consortium

Hiroshi Kawamura pursues the universal design of knowledge and information sharing system that may serve everybody in the community and strives to achieve harmonious development of the right of access to information and copyrights. Based on the idea of social inclusion, he is also committed to research and development on disaster preparedness of persons with disabilities and old people.

# 2nd Media Summit on Climate Change and Disaster Risk Reduction

12-14 May 2016 • Krabi, Thailand For more info, go to http://www.abu.org.my/Event- -ccdrr16.aspx

### Workshop Sponsors



#### WorldDAB

WorldDAB is the global industry forum responsible for defining and promoting DAB+, the digital radio broadcasting standard of choice in Europe, Asia Pacific and beyond. With unique cross-industry representation, our members cover 27 countries and include regulators, broadcasters and network providers through to manufacturers of receivers, chips, professional equipment and automobiles. Together we define and promote DAB+ offering support on all aspects of the switch from analogue to digital radio. This includes regulation, licensing, technology trials, network build out, marketing and production of digital radio content. We support and host industry events, briefings and tailored workshops providing insights, market intelligence and invaluable networking opportunities.

Bernie O'Neill, Project Director, WorldDAB 55 New Oxford Street London United Kingdom WC1A 1BS bernie.oneill@worlddab.org



#### DVB

Digital Video Broadcasting (DVB) is an industry-led consortium of over 200 broadcasters, manufacturers, network operators, software developers, regulators and others from around the world committed to designing open interoperable technical standards for the global delivery of digital media and broadcast services.

DVB standards cover all aspects of digital television from transmission through interfacing, conditional access and interactivity for digital video, audio and data.

DVB dominates the digital broadcasting environment with thousands of broadcast services around the world using DVB's standards. There are hundreds of manufacturers offering DVB compliant equipment. To date there are over a billion DVB receivers shipped worldwide.

Further information about DVB can be found at: www.dvb.org, www.dvbservices.com and www.dvbworld.org

### 44 Workshop Sponsors



#### Korea Radio Promotion Association (RAPA)

The Korea Radio Promotion Association (RAPA) was established under the Radiocommunication Act of the Republic of Korea with an aim to establish foundations for the development of the fields of radiocommunications and broadcast. It promotes a wide range of projects including government policy making assistance, support for industrial promotion, testing and technical support, and education under its mission of "The Hub of the Creative Economy nurtured by Radiocommunications and Broadcast".

Contact details Hwang Inung (Scott) E-mail: hiu@rapa.or.kr Tel: +82-2-317-6144 / Fax: +82-2-317-6061



#### **EMC Corporation**

EMC Corporation is a global leader in storage for media organizations, enabling content creators, broadcasters, and content delivery providers to transform their operations, simplifying the creation, delivery and archive of digital media assets. Through innovative products and services, EMC accelerates creation and monetization of media, helping media professionals to store, manage, protect and analyze their most valuable digital media assets in a more agile, trusted and cost-efficient way. Additional information about EMC can be found on our website.

EMC Information Systems Management Limited Singapore Branch 1 Changi Business Park Central 1 #08-101 ONE@Changi City Singapore 486036 Direct Line : +65 6692 3515 | Mobile : +65 9115 2569



#### **Digital Radio Mondiale (DRM)**

DRM is the universal, openly standardised digital broadcasting system for all broadcasting frequencies, including the AM bands (LW, MW, SW), as well as VHF Bands I, II - (FM band) and III.

DRM ensures the efficient and complete digitisation of those countries committing to the digital radio roll-out. The great flexibility of DRM supports all types of coverage needs – from local, regional, nation-wide to international. DRM allows a seamless transition to digital radio with the upgrade of existing transmitter infrastructure as well as with analogue-digital simulcast configurations. DRM digital radio can save broadcasters up to 80% in energy and maintenance costs. www.drm.org



#### **Rohde & Schwarz**

Today, the entire transmission chain from production and studio to the transmitter and consumer is digital. In addition to terrestrial transmitters, satellites and cable TV networks, Internet TV and radio are becoming ever more widespread vehicles for program distribution. Rohde & Schwarz (R&S®) offers network operators more than a complete range of terrestrial transmitters for all power classes and standards. We also have the T&M and monitoring equipment required for broadcasting operations. Special T&M equipment from R&S® is used to develop and manufacture consumer audio and video products efficiently and in line with specifications while ensuring high quality.

R&S<sup>®</sup> also supports the broadcast and media industry with groundbreaking solutions for coping with these changes. We already offer a complete portfolio for setting up a UHDTV (4K) workflow from the studio to the transmitter as well as the first products for even higher resolutions (8K).

Our video workstations are the de facto standard in Hollywood and other film capitals. They form entire workflow environments for post production studios when coupled with our high performance video server and storage solutions while R&S<sup>®</sup> Headends provide the appropriate realtime encoding for each connected transmission network (terrestrial, cable, satellite or IPTV).

ROHDE & SCHWARZ MALAYSIA Sdn Bhd. PAT SQUARE Jalan Pelukis U1/46 Temasya Industrial Park 40150 Shah Alam Selangor, MALAYSIA Website: www.rohde-schwarz.com.my Tel: +603 5569 0011 Fax: +603 5569 0088 Email: info.malaysia@rohde-schwarz.com



#### **Caton Technology**

Caton Technology Group is a U.S based high-tech enterprise, founded in 1996, a leading R&D and manufacturer focus on Broadcast video contribution and distribution and data transfer service over cloud solution. An Integrated video processing platform supporting multi-channel; multi-format video encoding over open Internet IP transmission solution. Four subsidiaries in Asia. - Singapore; Taiwan; Beijing and Shanghai.

With years of constant efforts and exploration, Caton Technology have made considerable progress in many technology aspects:

- Real-time digital encoding solution for broadcast video contribution and distribution.
- Over public internet solution for TV broadcaster &

Pay TV digital operators

• 3G/4G LTE/Wi-Fi transmission solution for major outdoor newsgathering and independent video producers around the globe to broadcast live event.

- Streaming media solution for new media operator.
- Enterprise Big Data transfer technology.

Next Generation Video Delivery Network (VDN) Caton Technology also provides its unique technology to the leading design manufacturers and developer partners across the professional video industry for integration into their product lineups. High-profile media companies around the globe are rely on the reliability, flexibility and performance of Caton's technologies.

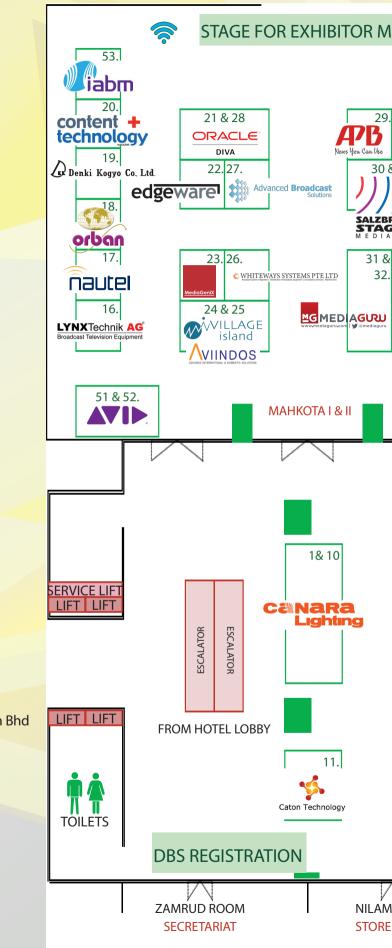
Contact details: CB Lau, Mobile: +65 91810885 VP, Sales & Marketing Caton Technology Asia Pte Ltd

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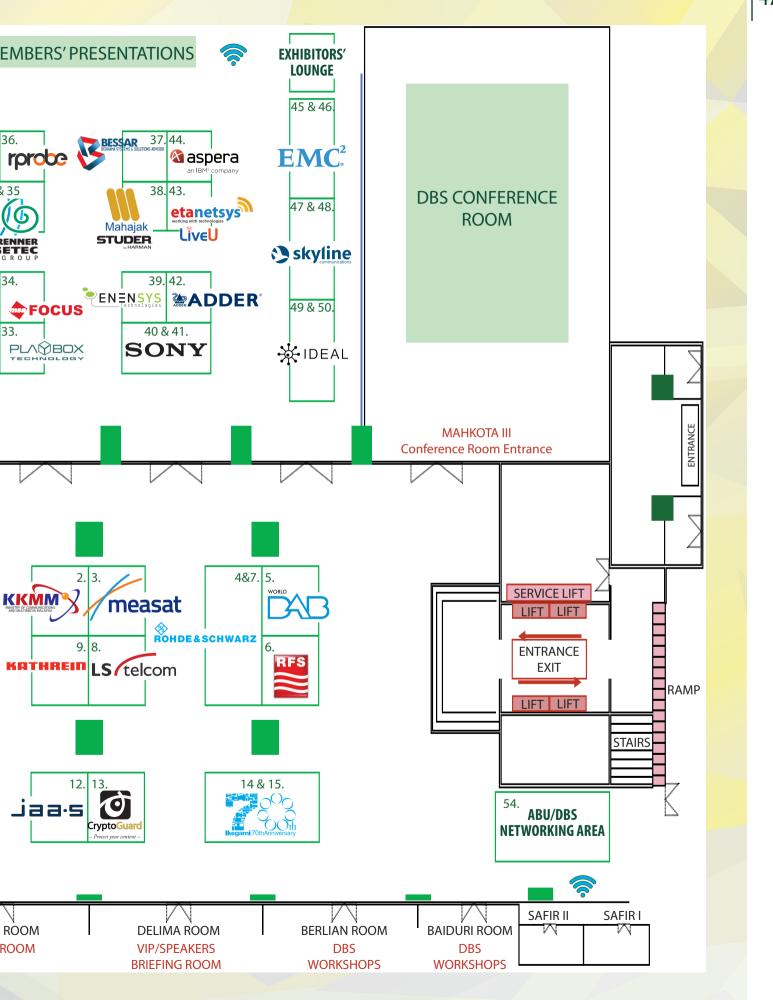
### Exhibition Floor Plan Hotel Istana, Ballroom Level

#### 1&10 Canara Lighting

- Ministry of Communications and Multimedia Radio Television Malaysia (RTM) National Film Development Corporation Malaysia (FINAS) Malaysian Communications and Multimedia Commission (MCMC) Multimedia Development Corporation MYNIC
   MEASAT
- 4&7 ROHDE & SCHWARZ
  - 5 WorldDAB
  - 6 Radio Frequency Systems
  - 8 LS telcom
  - 9 KATHREIN-Werke KG
  - 11 Caton Technology Asia
  - 12 JAA Systems Sdn Bhd
  - 13 CryptoGuard AB
- 14&15 Ikegami Electronics Asia Pacific Pte Ltd
  - 16 LYNX Technik Pte Ltd
  - 17 Nautel
  - 18 Orban Europe GmbH
  - 19 DKK Japan
  - 20 Content + Technology
- 21&28 Oracle
  - 22 Edgeware
  - 23 MediaGeniX
- 24&25 Village Island Asia Pte Ltd & Aviindos (M) Sdn Bhd
  - 26 Whiteways Systems Pte Ltd
  - 27 Advanced Broadcast Solutions Asia Pte Ltd
  - 29 Asia-Pacific Broadcasting
- 30&35 Salzbrenner Stagetec Mediagroup
- 31&32 MediaGuru
  - 33 PlayBox Technology Asia Pacific Sdn Bhd
  - 34 MSA Focus International Ltd
  - 36 RPROBE
  - 37 Bernama Systems & Solutions Advisor (BESSAR) Sdn Bhd
  - 38 Mahajak & Studer
  - 39 ENENSYS
- 40&41 SONY
  - 42 ADDER Technology
  - 43 ETA Network Systems
  - 44 ASPERA an IBM Company
- 45&46 EMC<sup>2</sup> Corporation
- 47&48 Skyline Communications
- 49&50 Ideal Systems SEA
- 51&52 AVID
  - 53 IABM
  - 54 ABU/DBS Networking Area



**INNOVATING DIGITAL CONNECTIONS** 



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#### Booth No 1&10: Canara Lighting Industries Pvt. Ltd.

Canara Lighting is biggest manufacturer of Studio Lighting System in South Asia. They provide total solution for Studio Lighting System Covering Consultancy, design, manufacturing, installation, commissioning, training and after sale service. Product range includes fixed grid and motorised hoists, lighting fixtures, cable management system, dimmers and lighting console.

LED lighting fixtures available are 200W & 400W Fresnel, 90W & 180W panels, 150W cyclorama wash light, 125W remote phosphor panel, 36x3 & 54x3 LED Par. Company also provides lighting fixtures in halogen, CFL & HMI technology for use in studios.

Customer support centre located at Canara Lighting Malaysia for this region.

Contact Details: Mr. Ajeet Khare E-mail: ajeet@canaralighting.com Mobile: + 91 98450 61859

Mr. Daveston Ahimaz E-mail: daveston@gmail.com Mobile: +6 014 3185025

Mr. Lee Keah Chang E-mail: wirayalee@yahoo.com Mobile: +6 016 3378086



Booth No 2: Ministry Of Communications and Multimedia Malaysia (KKMM)

The formation of The Ministry of Communications and Multimedia Malaysia (KKMM) was announced by the Prime Minister of Malaysia, YAB Dato' Sri Mohd. Najib bin Tun Haji Abdul Razak on May 15, 2013, with vision of leading Malaysia into becoming an information society.

KKMM's key mission is to develop and empower the growth of the content industry, information technology, information security, information infrastructure and multimedia infrastructure of the country. The ministry is supported by five departments and five agencies in accomplishing its mission. Through these 10 organisations, KKMM is able to meet its objective to :

- formulate, develop, coordinate, implement and monitor policies and regulations related to security and integrity of information, communication and multimedia;
- disseminate news and information accurately to Malaysians and the international community at large; and
- enhance creativity and innovation of the content industry; and
- develop policies and programmes pertaining to information security and communication infrastructure.

Lot 4G9, Persiaran Perdana, Precint 4, Central Administration of The Federal Government, 62100 Putrajaya, Malaysia. Tel: +603 8000 8000 E-mail: webmaster@kkmm.gov.my Website: www.kkmm.gov.my



#### RTM

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 70 by April 1st 2016, RTM will continue to play a crucial leading role in serving the Malaysian public through its diverse genres that broadcast via multiplatforms 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's Office 6th Floor, Wisma TV, Angkasapuri 50614 Kuala Lumpur, Malaysia Tel: +603 2288 7303 / Fax: +603 2284 7591 E-mail: feedback@rtm.gov.my



#### MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION (MCMC)

MCMC is a statutory body established under the Malaysian Communications and Multimedia Commission Act 1998 which implements and promotes the Government's national policy objectives for the communications and multimedia sector. MCMC regulates and promotes the development of the communications and multimedia sector which includes telecommunications and broadcasting industries, online activities, postal services and digital certification. The Communications and Multimedia Act 1998 provides that MCMC undertakes a policy implementation role, while policy decisionmaking is vested with the Minister. The Minister may also give policy directions to the Commission.

Malaysian Communications and Multimedia Commission (MCMC)

MCMC Tower 1 Jalan Impact, Cyber 6 63000 Cyberjaya Selangor, Malaysia Tel: +603 8688 8000 / Fax: +603 8688 1000 E-mail: scd@cmc.gov.my Website: www.mcmc.gov.my



### NATIONAL FILM DEVELOPMENT CORPORATION MALAYSIA (FINAS)

National Film Development Corporation Malaysia (FINAS) is Malaysia's leading film agency and authority entrusted with the responsibility of developing the film industry. FINAS was established in 1981, it is a statutory agency under the Ministry of Communications and Multimedia Malaysia. FINAS is responsible to promote, preserve and facilitate the development of the film industry in Malaysia.

Kompleks Studio Merdeka, Lot 1662, Batu 8, Jalan Hulu Kelang, 68000 Ampang, Selangor, Malaysia Tel: +603 4104 1300 Website: www.finas.gov.my Facebook: FINAS Malaysia

### **.MYNIC**

#### MYNIC

MYNIC is the sole administrator for web addresses that end with my in Malaysia. As an agency under Ministry Of Communications and Multimedia Malaysia, we promote the coolest website address in the world.

Domain names are not limited for Websites. You can also give a unique .my name to your personal or business social media pages.

MYNIC responsible in ensuring the development of domain name industry as part of ICT infrastructure in Malaysia. Thus, we are constantly evolving and continuously improving towards a better domain registry services for our customers. Go online go.my.

For more info please visit www.mynic.my.

- Facebook: mynicberhad
- Twitter: mynicberhad
- Instagram: mynicberhad

MYNIC Berhad Level 3, Block C, Mines Waterfront Business Park No.3, Jalan Tasik, Mines Resort City 43300 Seri Kembangan Selangor, Malaysia Tel: +603 89435510 / Fax: +603 89435520



#### Multimedia Development Corporation (MDeC)

The Multimedia Development Corporation (MDeC) was incorporated in 1996 to strategically advise the Malaysian Government on legislation, policies and standards for ICT and multimedia operations as well as to oversee the development of the Malaysian Multimedia Super Corridor (now MSC Malaysia), the platform to nurture the growth of Malaysian Small and Medium Enterprises (SMEs) in the IT industry whilst attracting participation from global ICT companies to invest in and develop cutting edge digital and creative solutions in Malaysia.

In 2011, MDeC's mandate was broadened by the Prime Minister to include driving Malaysia's transition towards a developed digital economy by 2020 through Digital Malaysia. In 2012, Digital Malaysia was official unveiled as the nation's transformational programme to achieve this aim. Digital Malaysia is a vision of a digital nation that is fully developed with a sustainable digital economy built upon a vibrant domestic ICT industry, transformative use of digital solutions by government, businesses and citizens, as well as a robust enabling ecosystem

Today, both MSC Malaysia and Digital Malaysia run concurrently to spur Malaysia's ICT industry development and digital transformation, under the purview of MDeC.

For more information, please visit: www.mdec.my www.mscmalaysia.my www.digitalmalaysia.my.



The MEASAT group is a premium supplier of services to leading broadcasters, Direct-ToHome (DTH) platforms and telecom operators. With capacity across six (6) 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. The MEASAT satellite fleet includes the state-of-the-art MEASAT-3, MEASAT-3a and MEASAT-3b satellites co-located at 91.5°E, supporting Asia's premium DTH and video distribution neighborhood; MEASAT-2 at 148.0°E; and, MEASAT-5 at 119.5°E. In Africa, the AFRICASAT-1a satellite at 46.0°E provides satellite capacity across the African continent with connectivity to Europe, the Middle East and Southeast Asia. For more information, please visit www.measat.com.

Tel : +603 8213 2188 / Fax : +603 8213 2233 E-mail : sales@measat.com



Today, the entire transmission chain from production and studio to the transmitter and consumer is digital. In addition to terrestrial transmitters, satellites and cable TV networks, Internet TV and radio are becoming ever more widespread vehicles for program distribution. Rohde & Schwarz (R&S<sup>®</sup>) offers network operators more than a complete range of terrestrial transmitters for all power classes and standards. We also have the T&M and monitoring equipment required for broadcasting operations. Special T&M equipment from R&S<sup>®</sup> is used to develop and manufacture consumer audio and video products efficiently and in line with specifications while ensuring high quality.

R&S<sup>®</sup> also supports the broadcast and media industry with groundbreaking solutions for coping with these changes. We already offer a complete portfolio for setting up a UHDTV (4K) workflow from the studio to the transmitter as well as the first products for even higher resolutions (8K).

Our video workstations are the de facto standard in Hollywood and other film capitals. They form entire

workflow environments for post production studios when coupled with our high performance video server and storage solutions while R&S<sup>®</sup> Headends provide the appropriate realtime encoding for each connected transmission network (terrestrial, cable, satellite or IPTV).

ROHDE & SCHWARZ MALAYSIA Sdn Bhd. PAT SQUARE Jalan Pelukis U1/46 Temasya Industrial Park 40150 Shah Alam Selangor, MALAYSIA

Website: www.rohde-schwarz.com.my Tel: +603 5569 0011 / Fax: +603 5569 0088 E-mail: info.malaysia@rohde-schwarz.com



WorldDAB is the global industry forum responsible for defining and promoting DAB+, the digital radio broadcasting standard of choice in Europe, Asia Pacific and beyond. With unique cross-industry representation, our members cover 27 countries and include regulators, broadcasters and network providers through to manufacturers of receivers, chips, professional equipment and automobiles. Together we define and promote DAB+ offering support on all aspects of the switch from analogue to digital radio. This includes regulation, licensing, technology trials, network build out, marketing and production of digital radio content. We support and host industry events, briefings and tailored workshops providing insights, market intelligence and invaluable networking opportunities.

Bernie O'Neill, Project Director WorldDAB 55 New Oxford Street London, United Kingdom, WC1A 1BS E-mail: bernie.oneill@worlddab.org



#### **Booth No 6: Radio Frequency Systems**

RFS is a global designer and manufacturer of cable and antenna systems plus active and passive RF conditioning modules, providing total-package solutions for wireless infrastructure. RFS serves OEMs, distributors, system integrators, operators and installers in the broadcast, wireless communications, land-mobile and microwave market sectors.

We provide RF Systems solutions for television & radio, HF & defence, cell-based mobile communications, inbuilding, in-tunnels, radio-link networks, and LMR/PMR.

Ashley Bicknell 36 Garden Street, Kilsyth VIC 3137, AUSTRALIA Tel: +61 3 9751 8551 / +61 413 200 680 E-mail: ashley.bicknell@rfsworld.com www.rfsworld.com



LS telcom is the leading supplier of coverage & frequency planning, coordination and optimisation solutions for broadcast networks.

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

LS telcom Im Gewerbegebiet 31-33, 77839 Lichtenau, Germany Milos Pavlovic E-mail: MPavlovic@LStelcom.com General: Info@LStelcom.com www.LStelcom.com Tel: +49 7227 9535 600 / Fax: +49 +7227 9535 605

### KATHREIN

**Booth No 9: KATHREIN-Werke KG** 

KATHREIN-Werke KG is an international enterprise active in antenna and communications technology. For more than 95 years the group of companies has been developing, producing and marketing a wide range of antenna systems and signal processing products. Always being one step ahead in technology has ensured that Kathrein is among the leading companies in the world market. The Kathrein Group is active in the following product ranges:

• Radio and TV broadcast antennas, filters and combiners • FM, TV, DAB, DAB+, DMB, DVB-T, DVB-T2, DTV, and DVB-H antenna systems • Ground-to-Air (GTA) antenna systems • CATV systems and signal processing equipment • Broadband communication systems, HFC nets and headends • IPTV Solutions • Signal meters and test equipment • Mobile communication antennas and reception systems • Combiners and amplifiers for mobile communication base stations • Car antennas and electronics • RFID systems

Offering over 5,000 different products covering many different fields of telecommunication technology, Kathrein is one of the largest and oldest antenna manufacturers world-wide. One of our basic principles is to constantly look for perfect solutions to all our customers' requirements, assisted through our traditional Quality Assurance System which is certified according to DIN EN ISO 9001/14001.

KATHREIN-Werke KG Broadcast Antenna Systems BCA Anton-Kathrein-Str. 1-3 83022 Rosenheim, Germany Tel: +49 8031 184-958 / Fax: +49 8031 184-495 E-mail: broadcast@kathrein.de www.kathrein.com



#### **Booth No 11: Caton Technology Asia**

Caton Technology Group is a U.S based high-tech enterprise, founded in 1996, a leading R&D and manufacturer focus on Broadcast video contribution and distribution and data transfer service over cloud solution. An Integrated video processing platform supporting multi-channel; multi-format video encoding over open Internet IP transmission solution. Four subsidiaries in Asia. - Singapore; Taiwan; Beijing and Shanghai.

With years of constant efforts and exploration, Caton Technology have made considerable progress in many technology aspects:

- Real-time digital encoding solution for broadcast video contribution and distribution.
- Over public internet solution for TV broadcaster & Pay
   TV digital operators
- 3G/4G LTE/Wi-Fi transmission solution for major outdoor newsgathering and independent video producers around the globe to broadcast live event.
- Streaming media solution for new media operator.
- Enterprise Big Data transfer technology.
- Next Generation Video Delivery Network (VDN) Caton Technology also provides its unique technology to the leading design manufacturers and developer partners across the professional video industry for integration into their product lineups. High-profile media companies around the globe are rely on the reliability, flexibility and performance of Caton's technologies.

#### CB Lau

VP, Sales & Marketing Caton Technology Asia Pte Ltd Mobile: +65 91810885



#### **Booth No 12: JAA Systems Sdn Bhd**

JAA Systems Sdn Bhd is a leading international company that handles IT, Audio & Video related markets in South East Asia region. We are associated with Junger Audio Asia Pte. Ltd, the daughter company of Junger Audio GmbH based in Berlin, Germany. We specialize in Audio, Video and IT technologies for Broadcast, Live Sound and IT markets. Our principal partners include Junger Audio, Prodys, Klotz, AXEL and SDNSquare. We provides distribution of partner products, focus in design, consultancy, solution provider, maintenance support and professional training services.

David Chan Phone: +603-8011 1486 E-mail: david@jaasys.com www.jaasys.com



#### Booth No 13: CryptoGuard AB

#### **CryptoGuard Content Protection – CAS and DRM**

CryptoGuard is a flexible Conditional Access System (CAS) and Digital Rights Management (DRM) system for digital television. We are using a high-grade encryption scheme to meet the demands of service providers, broadcasters and operators. Our solution works well in all kinds of and any size of network. However the business model facilitates even for smaller and medium sized operators to use the system.

CryptoGuard is a complete package including high security CAS and DRM and Subscriber Management System (SMS) for DVB-C, DVB-S, DVB-T, IPTV and OTT. We support all devices like STBs, smartphones, tablets, PCs, MAC, Smart TVs and PlayStations. The SMS allows you to handle subscribers, smart cards, ordering, customer care, billing, user devices etc.

Vidar Sandvik E-mail: Vidar@CryptoGuard.com Tel: +47 9583 2707

CryptoGuard AB Ostermalmsgatan 101, 591 60 Motala, Sweden Tel: +46 971 107 35



#### Booth No 14&15: Ikegami Electronics Asia Pacific Pte Ltd

To express appreciation to all stakeholders who have been supporting the Ikegami Tsushinki group so far, we have produced the following logo:

It is hoped that this design, symbolic of seven innovative and successful decades, will encourage everyone in the Ikegami team to pursue customer satisfaction with ever greater enthusiasm, carrying the group forward in a spirit of cooperation and progress.

The logo intersperses silhouettes of our main products classified as segments of the number 7, showing lkegami's accumulated efforts and the depth of the group's history. The circle ring symbolizes the flower, associated with dreams and aspirations. Each petal represents a decade of growth. This signifies ongoing technical innovation, the solidarity of all employees working at lkegami and the group's ability to operate in successful partnership with its many customers around the world.

Ikegami Electronics Asia Pacific Pte. Ltd. 1 Tampines Central 5, #03-03 CPF Tampines Building, Singapore 529508 Tel: +65 6260 8820 / Fax: +65 6260 8896 E-mail: info@ikegami.com.sg



Broadcast Television Equipment

#### **Booth No 16: 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 heardquarters 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 I lite 3G digital signal generators.

LYNX-Technik Pte Ltd | Broadcast Television Equipment 114 Lavender Street CT HUB2 #05-92 Singapore 338729 Tel: +65 6702 5277 / Fax: +65 6385 5221 E-mail: infoasia@lynx-technik.com Company Registration: 201324797H



Nautel offers the industry's broadest portfolio of digital and analog solid-state transmission platforms including 1 kW – 2 MW AM, 300 W – 88 kW FM radio transmitters, low-power UHF TV transmitters, and solutions for digital broadcast. Nautel transmitters offer comprehensive monitoring and control instrumentation via touch screen or web, outstanding reliability, compact footprints, high efficiency, easy maintenance, and 24/7 support. Nautel's latest industry-leading innovations include: Awardwinning, low-power FM transmitters from 200 W – 2.5 kW; Unmatched monitoring and control with Nautel's award-winning AUI; Industry-leading high-power compact MW transmitters; Advanced Digital Radio solutions; and, Low-power Digital UHF TV transmitters supporting worldwide standards.

John Abdnour Sales Manager Tel: +1 815 672 8585 E-mail: John.abdnour@nautel.com



**Booth No 18: ORBAN** 

With the world renown OPTIMOD we are the leading manufacturer of Television Loudness Controllers , AM, FM and Streaming audio processors.

Our engineering team in San Leandro, USA is headed by the companies founder Bob Orban. Since 2009 manufacturing – worldwide sales and technical support is under the supervision of Orban Europe GmbH in Germany.

From the BBC to CNN many Broadcasters rely on the OPTIMOD to ensure that their Broadcast audio quality is perfect, their levels under control with no artefacts.

ORBAN opened it's office in Ludwigsburg in 2002 to spearhead European Sales and Codec Engineering.

OPTIMOD manufacturing is performed in Germany and since 2009 ORBAN Europe is responsible for ORBAN Global sales.

Orban Europe Management Mr. Peter Lee Vice President Orban, Director of Sales Tel +31 299 402577 email. plee@orban.com www.orban.com

Denki Kogyo Co., Ltd.

#### Booth No 19: Denki Kogyo Co., Ltd.

Denki Kogyo (DKK) offers all varieties antennas from Very Low Frequency (VLF) to Extremely High Frequency (EHF) based on 65 years of design and development experience.

DKK is an experienced company which installed terrestrial digital broadcasting (DTV) antennas in China, South Korea and all over Japan. Also, it is scheduled to supply DTV antennas in Thailand in March, 2016.

Our products are installed on Tokyo Skytree and Tokyo Tower, such as transmitting antennas, parabolic antennas and FPU rotators. All of products are designed and manufactured by ourselves. Offices are located in Tokyo, Japan and Bangkok, Thailand.

DKK

Central Sales Dept. Branch Administration Div. 3-3-1 Marunouchi, Chiyoda-ku, Tokyo 1005-0005 JAPAN Tel: +81-3-6269-9057 Fax: +81-3-3216-1669 http://www.denkikogyo.co.jp/en/



**Booth No 20: Content + Technology** 

For over 13 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 E-mail: papers@broadcastpapers.com Adam Buick, Advertising Sales Manager Tel: +61 (0)413 007 144 adam@broadcastpapers.com www.content-technology.com



DIVA

#### Booth No 21: & 28 Oracle

Oracle DIVA is the #1 provider of content storage management solutions for preserving, managing, and protecting rich-media content. Operating both on site and in the cloud, the company's purpose-built software employs the latest technologies to deliver truly flexible and scalable media workflows.

Jason Liw, Sales Manager, Digital Media Solutions Oracle Corporation Singapore Pte Ltd 1 Fusionopolis Place, Level 12 Galaxis, Singapore 138522

Tel: +65 6436 1000 / Fax: +65 6436 1001 Direct: +65 6436 1113 / Mobile: +65 9178 0262 Sales: 1800-ORACLE-1 (1800 672 2531) E-mail: jason.liw@oracle.com oracle.com



**Booth No 22: Edgeware** 

Most networks were not made for video. As TV moves into the cloud, service providers face complex, new delivery challenges. Edgeware has a complete solution to enable delivery of profitable, next generation cloud TV and video services, including video on demand (VOD), time shift TV and Cloud DVR, as well as wholesale Content Delivery Network (CDN) services.

Enabling the best viewing experience without costly equipment upgrades in the network or customer's premises, Edgeware is already powering some of the fastest growing and most innovative services in the world.

Edgeware is headquartered in Stockholm, Sweden, with offices worldwide.

www.edgeware.tv E-mail: sales@edgeware.tv

Edgeware AB Global Headquarters Mäster Samuelsgatan 42, 11th Floor, SE-111 57 STOCKHOLM, Sweden Tel: +46 73 612 6840

Hong Kong Office 1902-5, 19/F, Sunlight Tower, 248 Queen's Road, East Wanchai, Hong Kong Tel: +(852) 3184 0660



**Booth No 23: MediaGeniX** 

MediaGeniX delivers state-of-the-art software for radio and television channels since 1992. Our integrated software suite WHATS'On has developed into the most advanced broadcast management solution. It is the backbone for broadcasters, on-demand service providers, and platform/ telco operators worldwide as it includes long- and shorttime scheduling, media and rights management and reporting. With WHATS'On customers schedule content in line with strategic, editorial, budgetary, operational and regulatory requirements, and have the central hub they need to streamline workflows and optimize core processes.

Over 1,700 channels and on-demand services are managed with WHATS'On, with 9,500+ users at more than 65 media networks, worldwide.

Contact details: MediaGeniX Asia Pte Ltd 16 Raffles Quay - #33-03, Hong Leong Building, Singapore 048581

Johan Vanmarcke Managing Director MediaGeniX Asia Pte Ltd +66 945 868 560 (Thailand) +65 8184 9383 (Singapore) E-mail: asia@mediagenix.sg www.mediagenix.sg



Booth No 24 & 25: Village Island Asia Pte Ltd & Aviindos (M) Sdn Bhd

#### Aviindos (M) Sdn Bhd

Aviindos sets its focus in providing quality consultation to the industry with its wide range of test & measurement solutions together with complete system design, integration and implementation services.

With over 10 years of combined experience and its business representation of technological partners from the European, North American and Japanese continent, Aviindos brings to the industry the latest technological advancement to suit the various customizable industry needs, for Broadcast, Satellite, Wireless, Telco and other related industries.

#### Village Island

Village Island, established in Japan in 2005 with a regional sales office based in Singapore is dedicated to deliver state-of-the-art solutions to every sector of the broadcast industry. Our team of experienced engineers strive to identify customer needs and respond through the use of top quality products from leading manufacturers such as DekTec, Sencore and Skyline.

We specialise in Monitoring solutions including hardware probes as well as monitoring software (Dataminer end-to-end NMS), allowing us to provide insights and meaningful reports to Satellite, Cable and IPTV/OTT customers. With a strong installed customer base in the region, we are proud to sell our expertise in the monitoring field.

Our solutions also include standalone units ready to be integrated into existing workflows, or full systems integrated with our in-house multipurpose software platform, VillageFlow.

#### Aviindos

Naveendran Murthy, Sales Director Mobile: +6012-903 2050 / Tel: +603-9133 3513 E-mail: naveen@aviindos.com Website: www.aviindos.com

#### Village Island

Jonathan Triboulet, Sales Director Mobile: +65-9795-7899 /Tel: +65-6294-0473 E-mail: jtriboulet@village-island.com Website: www.village-island.com

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

#### **Booth No 26: Whiteways Systems Pte Ltd**

Whiteways is focused on the Broadcast, professional video production and post production industries. We provide the following:

Sell a whole range of specific products and services to broadcast, video production and post production industries.

Commission large complex projects from start to finish – including (but not limited to) system design, supplying, installation, commissioning and training on a turnkey basis.

Provide bespoke services for very specific tasks – for example – specialized graphics, analog to digital transition, SD to HD upgrade, archival of old Tapes and so on.

Consultancy services and Technical advice.

We can be contacted at – raza@whiteways.sg or visit our website – www.whiteways.biz



#### Booth No 27: Advanced Broadcast Solutions – Asia Pte Ltd

Advanced Broadcast Solutions – Asia's (ABS) is headquartered in Singapore and focuses on customers throughout the Asia Pacific region. ABS 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, ABS consulting services can help customers with personalized services to align requirements with technologies in areas such as workflow, production and infrastructure. Complete turnkey Project Integration services available from concept through commissioning. Compete product supply from top manufactures. ABS is able to support any size operation and budget with complete product and solutions.

#### Contact:

E-mail: sales@advancedbroadcastsolutions.asia Tel: +65 88694565



#### **Booth No 29: Editec International**

#### News You Can Use

Editec International is the publisher of Asia-Pacific Broadcasting (APB), a monthly publication that has been the voice of the broadcast and multimedia industry for more than 25 years. APB brings to decision-makers and professionals in the field, news of groundbreaking events, the hottest developments and the latest in technology trends, as well as interviews with key industry players.

In 2002, APB established DigiWorkz, the Asia-Pacific Broadcast Training Centre based in Singapore's Ngee Ann Polytechnic, to provide broadcasters from around the region with short, practical broadcast engineering and production courses. DigiWorkz also develops customised training for broadcasters in the region. It has conducted in-house courses for broadcasters in Hong Kong, Malaysia and the Philippines.

Lynn Chee Chief Community Officer 61 Tai Seng Avenue, #05-01 Crescendas Print Media Hub, Singapore 534167 Tel : +65 6282 8456 Email: lynn@editecintl.com www.apb-news.com / www.thesoundreport-news.com



Booth No 30 & 35: Salzbrenner Stagetec Mediagroup Company

This year marked the 12th year of Salzbrenner Stagetec Mediagroup Asia in the audio professional industry market. We have been providing a reputable audio equipment solutions to Asian region in bringing broad range complementing products. We are the principals for Salzbrenner, Stagetec & Delec products. Throughout the time we have partnership with other remarkable brands like DHD, Zenon Media, Sonifex, RTW, ADAM Audio, Merging Technologies and additional latest partnership with Linear Acoustic & Minnetonka; an audio loudness solutions. We also provide client support by serving professional training through Mediagroup Academy, cater for all trainings from product to knowledge development. In collaboration with Dolby, the academy is the first 5.1 surround sound and audio loudness training centre in Malaysia.

Mr Advon Tan E-mail: a.tan@stagetec.com Tel: +60 123836632



Booth No 31 & 32: MediaGuru

MediaGuru is a leading global media services company providing end-to-end solutions and services including digitization, media asset management, digital media, technology solutions and consulting to broadcasters and media organizations. With over a decade of experience in setting-up state-of-the-art broadcasting stations, new media ventures and revamping the existing infrastructure, MediaGuru has helped broadcasters world-over to turn their enterprises into profitable businesses.

Some of our clients include TV Today Network, TVC News, TV3, Times Group, Sony, Rajya Sabha TV, Prasar Bharati, Kenya Broadcasting Corporation, K24 (Mediamax), News Live, IBN7, Fiji Broadcasting Corporation, Consat, Express News among others.

MediaGuru is headquartered in India with offices in Singapore, South Africa and UAE servicing its clients across South Asia, Middle East and Africa. For more information, visit www.mediaguru.com

Contact: Heena Tandon E-mail- Marketing@mediaguru.com Tel: +91 9990327773



#### Booth No 33: PlayBox Technology Asia-Pacific

PlayBox Technology, the global leader in broadcast television playout and channel branding, announces the latest upgrades to its established PlayBox product range: AirBox Neo, TitleBox Neo, CaptureBox Neo and SafeBox Neo. The upgrades include UHD compatibility, a high-efficiency user interface plus a wide range of new feature enhancements.

"We have put a huge amount of time and effort into research and development since the recent board restructure, enhancing and expanding the PlayBox suite of products," states PlayBox Technology President Don Ash. "Neo is an evolutionary upgrade which will advance the PlayBox platform into the UHD era and beyond. It confirms our commitment to delivering the most efficient and future-proof playout and branding solutions."

"With a user base running at over 16,000 broadcast playout and branding channels, we are the world's number one product manufacturer addressing this business sector," adds PlayBox Technology Regional Sales Director, Iulian Ionescu. "Customers with valid Annual Software Maintenance & Technical Support can upgrade their existing PlayBox products to the latest Neo versions as a simple download. If they contact PlayBox Technology at sales.asia@playboxtechnology.com, we will be able to analyse their system and advise relevant upgrade options."

Iulian Ionescu Regional Sales Director Mobile: +6 019 668 9100 Skype ID: "iulian\_playbox"



#### **Booth No 34: MSA Focus International Ltd**

MSA Focus International Limited a world-leading developer of broadcast management systems, with solutions successfully installed at client sites in at least 30 countries, across four continents, since 1988. Worldwide market presence has led to the establishment of a global support network with offices in Europe, America and Asia. As part of MSA Inc, MSA Focus is unique among BMS suppliers. MSA, which celebrates its 50th anniversary this year, services several market sectors, specializing in the development of common principles of best practice in data

management and analysis. For 50 years it has remained true to its research-driven roots, while consistently nurturing a spirit of innovation. This has provided MSA Focus the ability to concentrate on developing leading-edge applications for the broadcasting sector. Experienced, international teams of broadcast analysts, integration specialists and developers leverage cuttingedge technologies and modern development tools for the development, implementation and support of our solutions. Integration to systems from complementary suppliers remains an important factor, but the main strategy for MSA Focus is delivering business process solutions to improve the productivity and profitability of our clients. This is achieved by specialization in a single class of product while drawing on expertise within MSA.

B-1008, Block B, Kelana Square No. 17, Jln SS7/26, 47301 Petaling Jaya, Selangor, Malaysia Tel: 603 7806 1358 E-mail: marketing@msafocus.com| Website: www.msafocus.com



**Booth No 36: RPROBE** 

RPROBE is a probing platform designed for spectrum sensing applications.

It allows operators, broadcasters and regulators to remotely monitor the digital television transmission signal in real time, keeping a record of the network status with intelligence over the collected measurements.

RPROBE has in Portuguese communications regulator his biggest customer. With almost 400 probes installed wisely in all country (considering population distribution) ANACOM controls all DVB signals being transmitted, emulating user experience, with a real time status of all reception sites in a single view and with all the measurements recorded for further analysis.

rprobe@rprobe.com +351 309 983 711



#### Booth No 37: Bernama Systems & Solutions Advisor (BESSAR) Sdn Bhd

BERNAMA Systems & Solutions Advisor Sdn. Bhd. (BESSAR) is a leader in providing software and integrated systems and solutions to the IT and Broadcast industry. BESSAR has serviced over 2000 customers in more than 5 countries. In the essence, BESSAR 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. BESSAR also functions as a provider of technical maintenance and support systems, solutions and application software related to multimedia, data, broadcasting, ERP and office automations.

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

BERNAMA Systems & Solutions Advisor Sdn Bhd, Lot L1-E-3A, Enterprise 4, Technology Park Malaysia, Bukit Jalil, 57000 Kuala Lumpur Tel : 03-89963500 / Fax : 03-89963536 E-mail : business@bessar.com.my



The MAHAJAK Group (Malaysia, Thailand and Singapore) is the renowned market leader in professional audio & broadcast production system in the region, specializing in consultation, design, supply and installation of broadcast, AV and live sound industries for more than 50 years. We are the authorized sole distributor for HARMAN PROFESSIONAL in Thailand, Malaysia and Singapore and we provide one-stop solution for all the audio needs in the audio industries.

STUDER designs and manufactures the most advanced digital Audio Consoles for TV and Radio broadcasters world-wide. Highly skilled workforce in Zurich and

London offering bespoke development, networking, service, support and training. Over 1Billion people are listening to STUDER consoles at any times.

HARMAN PROFESSIONAL is a US based conglomerate and is probably the world's largest and famous professional audio company. Harman Professional companies include Studer<sup>®</sup>, Soundcraft<sup>®</sup>, AKG Acoustics<sup>®</sup>, BSS Audio<sup>®</sup>, Crown International<sup>®</sup>, dbx Professional<sup>®</sup>, JBL Professional<sup>®</sup>, Lexicon Pro<sup>®</sup>, HiQnet<sup>®</sup>, Digitech, AMX, Martin lighting. These companies design, manufacture and market leading professional audio products for recording and broadcast, musicians, cinema, touring sound, commercial sound and contracting applications. All of Harman's brands are great performers, but they are even better as an ensemble.

MAHAJAK TRIO ELECTRONIC SDN BHD 4, Jalan BP 4/2, Bandar Bukit Puchong 47100 Puchong, Selangor, Malaysia Tel: +603-80608676 / 8680 / Fax: +603-80608755 E-mail: leeck@mahajaktrio.com



#### **Booth No 39: Enensys**

ENENSYS Technologies is a leading designer and manufacturer of digital TV transmission and monitoring systems. ENENSYS Networks offers products for use between encoder/multiplexer output and transmitter input, facilitating SFN adaption, switching, distribution network capacity optimisation, EWS and local content insertion, specialising in DVB-T/T2 and ISDB-T infrastructure.

TetsSystems from ENENSYS 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 is based in Rennes, France, with partners worldwide offering local sales and support.

ENENSYS Technologies 6 rue de la Carriere, CS 37734 35577 Cesson Sevigne Cedex FRANCE

Tel: +33 170 725 170 Web: www.enensys.com E-mail: sales@enensys.com



Booth No 40 & 41: Sony Corporation of Hong Kong Ltd.

Sony manufactures audio, video, communications and information technology products for the global consumer and professional markets. Professional Solutions Company (PSAP) is established as a division company under Sony Corporation of Hong Kong Ltd. It markets Sony's leading broadcast systems, professional video and audio products, as well as videoconferencing, medical and surveillance systems in Asia other than Japan. It also provides customised business solutions, comprehensive technical support and after-sales service to help Sony's customers stay at the forefront of their business.

URL: pro.sony-asia.com Contact us: https://pro.sony-asia.com/pro/lang/en/hk/ ezone/rfi/-sitehomepage/ E-mail: pro.info@ap.sony.com



Adder Technology design and manufacture a range high performance KVM switches, extenders and connectivity solutions. These products provide reliable control of multiple local, remote and global computer resources.

Across the audio and visual broadcasting industry, Adder Technology have connectivity solutions that enable gallery control, post-production, outside broadcast and radio station workflows with instant switching between remote computers from one location. Users have complete flexibility in their setup which provides improved desk ergonomics and free-flow computer access with the Adder Pro4, lossless extension and pixel perfect video with the AdderLink Infinity and complete matrix functionality with the AdderLink Infinity Manager. Website: www.adder.com

ADDER TECHNOLOGY

Saxon Way, Bar Hill, Cambridge, CB23 8SL, UK Tel: +44 (0)1954 780044 / Fax: +44 (0)1954 780081 Email: sales@adder.com

#### ADDER ASIA

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

Our partners include LiveU, SAMCON, Mobotics and Satamatics.

LiveU, the pioneer and leader in IP-based live video services and broadcast solutions for acquisition, management and distribution, will present its complete range of broadcast video devices and workflow solutions, including:

**LU500** - The ultimate combination of high-performance and portability for cellular uplink and four-time award winner in 2014.

**LU200** - The ultra-small newsgathering device that offers a highly attractive price, performance and form-factor for live video transmission.

**LiveU Central+** – the enhanced cloud-based management and video distribution system. This powerful tool enables fleets of units to be centrally controlled using geo-location capabilities alongside a host of other management options.

E-mail: natzakaria@gmail.com www.etanetsys.com



Booth No 44: Aspera, an IBM company

Aspera, an IBM company, is the creator of nextgeneration transport technologies that move the world's data at maximum speed regardless of file size, transfer distance and network conditions. Based on its patented, Emmy<sup>®</sup> award-winning FASP<sup>™</sup> protocol, Aspera software fully utilizes existing infrastructures to deliver the fastest, most predictable file-transfer experience. Aspera's core technology delivers unprecedented control over bandwidth, complete security and uncompromising reliability. Organizations across a variety of industries on six continents rely on Aspera software for the businesscritical transport of their digital assets. Please visit http://www.asperasoft.com and follow us on Twitter @ asperasoft for more information.



**Booth No 45 & 46: EMC Corporation** 

EMC Corporation is a global leader in storage for media organizations, enabling content creators, broadcasters, and content delivery providers to transform their operations, simplifying the creation, delivery and archive of digital media assets. Through innovative products and services, EMC accelerates creation and monetization of media, helping media professionals to store, manage, protect and analyze their most valuable digital media assets in a more agile, trusted and cost-efficient way. Additional information about EMC can be found on our website.

EMC Information Systems Management Limited Singapore Branch 1 Changi Business Park Central 1 #08-101 ONE@Changi City Singapore 486036 Tel: +65 6692 3515 / Mobile : +65 9115 2569



**Booth No 47 & 48: Skyline Communications** 

DataMiner is the most advanced end-to-end multivendor network management & OSS solution available for broadcast, satellite, cable, telco and mobile industry. The platform offers a plethora of functions including unlimited web access, alarm monitoring, email and SMS notification, long-term trending, professional reporting, advanced automation, intelligent correlation and root cause analysis, service management, realtime SLA monitoring, user-definable key performance indicator dashboards, spectrum monitoring, mobile access, powerful CPE management, inventory, asset management, and much more. One interface to manage your entire operational ecosystem, across any vendor and technology boundaries, results in a significant reduction of operational expenses and increased quality of service.

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Booth No 49 & 50: Ideal Systems S.E.A.

Ideal is the leading broadcast and media systems integrator within Asia Pacific providing innovative system design solutions to broadcasting and telecoms, enterprise, government, and educational institutions.

Having built and sustained the reputation in the broadcasting industry for providing quality, state-of-theart facilities and studios over 25 years of operation, Ideal has now expanded its footprint to operate in 11 offices within 9 countries in Asia. We at Ideal receive support from over forty of the most respected global technology partners in the industry, catering to hundreds of clients and servicing thousands of channels within the region.

Ideal Systems (Malaysia) Sdn Bhd Unit 8-1, Level. 8, Tower 9, Avenue 5, Bangsar South 8 Jalan Kerinchi, 59200 Kuala Lumpur, Malaysia Tel 1: +60-3-2242-4466 Tel 2: +60-3-2242-4477 E-mail: sales\_singapore@idealsys.com Contact Person: Updesh Singh



Through Avid Everywhere<sup>™</sup>, Avid delivers the industry's most open, innovative and comprehensive media platform connecting content creation with collaboration, asset protection, distribution and consumption. Media organizations and creative professionals use Avid solutions to create the most listened to, most watched and most loved media in the world—from the most prestigious and award-winning feature films, to the most popular television shows, news programs and televised sporting events, as well as a majority of today's most celebrated music recordings and live concerts. Industry leading solutions include Pro Tools®, Media Composer®, ISIS®, Interplay®, ProSet and RealSet, Maestro, PlayMaker, and Sibelius®.

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### Representing broadcast and media technology suppliers worldwide

ABM is the authoritative voice of the broadcast and media technology supply industry worldwide. Its wide range of services to members encompasses market research and intelligence, training, expert representation at standards bodies and broadcasting unions, executive networking opportunities, and preferential purchasing. A presence at every major broadcast tradeshow, IABM also provides a valuable channel for communication among broadcast manufacturers, government, and regulatory bodies. Additional IABM activities include awards programs for innovation and scholarships designed to stimulate the development of the broadcast and electronic media industries on an international basis. For more information, please visit www.theiabm.org.

Peter Bruce, Director, APAC Tel: +65 6679 5839 E-mail: peter.bruce@theiabm.org IABM, 3 Bredon Court, Brockeridge Park, Twyning, Tewkesbury, Gloucestershire, GL20 6FF, United Kingdom



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### **Industry Panel**













### "Digital Radio for the Future" 3 March, Session 10, 11:15 - 13:00

Over the past few years the industry has seen huge momentum towards the move to digital, specially in terrestrial delivery. Most broadcasters around the region and the world have announced their Analogue Switch-Off (ASO) dates and some of the advanced broadcasters have already completed the process. But this digital switch over is for television services not for radio.

In the case of digital radio the move is seen to be very slow. The standards for digital radio have been in place for more than two decades and some broadcasters in our region have been testing and in some cases running trials for many years. While digital radio broadcasting offers many potential benefits, similar to digital television, in terms of quality improvement, higher efficiency and being more environment friendly, among others, its introduction may have been hindered for other socio-economic reasons. The implementation and roll-out of digital radio services in Europe and US has been much faster compared to other regions.

Digital Radio brings a lot of benefits for broadcasters as well as audiences, including; Audiences can enjoy much better sound quality and a wider choice of radio stations; easy tuning and new features like text, pictures and other multimedia content; modern digital radio devices consume less energy than today's analogue radios; broadcasters can save more than 70% on their distribution costs while having up to five times more channels on air; and it is more spectrum efficient, to mention a few. Industries will also benefit from digital radio, be it with the equipment of connected cars, or with new business models emerging through the use of multimedia functions and the combination of broadcast and broadband.

With all these benefits and technology solutions available, why has digital radio implementation not picked up as fast as digital television? Why is the digital radio industry moving slower in the Asia-Pacific region compared to Europe and others? How can broadcasters move forward with implementation? What first steps are necessary for a good start? What are the opportunities and do they outweigh the challenges? How does the future roadmap for digital radio implementation look in the region?

The Industry Panel will debate these and other areas related to radio going digital and what the future holds for the digital radio roll-out in the region.

#### INNOVATING DIGITAL CONNECTIONS

## 64 Photo Gallery 2015



• 954 Total number of participants • 585 Symposium Delegates • 218 Walk-in visitors to exhibition •





### • 72 Speakers • 13 Workshops • 43 Countries represented •



#### INNOVATING DIGITAL CONNECTIONS

### 66 ABU Engineering & Technical Awards 2015





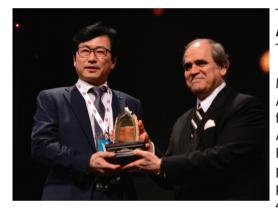
Dr Javad Mottaghi, ABU Secretary-General, presenting the award to Ms Lim Soh Kwang of RTB-Brunei.

The winner of the 2015 **ABU Developing Broadcasters' Excellence Award** was Ms Lim Soh Kwang, Superintendent Engineer (Head of Technical Services) of Radio Television Brunei.

Ms Lim Soh Kwang of Radio Television Brunei won the ABU Developing Broadcasters' Excellence Award for her outstanding role in setting up a digital archiving media asset management system.

Ms Lim established a dedicated archive section and played a major role in digital migration initiatives, as well as initiating and managing other major engineering projects.





Dr Javad Mottaghi, ABU Secretary-General, presenting the award to Mr Seok Doo, KIM of KBS-Korea.

The winner of the 2015 **ABU Broadcast Engineering Excellence Award** was Mr Seok Doo, KIM, Executive Managing Director, Technology, Korean Broadcasting System.

Mr Seok Doo, KIM won the ABU Broadcast Engineering Excellence Award 2015 for strengthening the terrestrial broadcasting platform and for his contributions to next generation broadcasting development. Among other achievements, Mr KIM established the KBS Broadcasting Equipment Certification Center, constructed a file-based radio production/transmission system, and developed a real-time TV participation service. Mr KIM also carried out the world's first terrestrial 4K UHD live broadcasting.





Mr Masakazu Iwaki of NHK-Japan and ABU Technical Committee Chairman, presenting the award to Mr Zou Feng of the Academy of Broadcasting Science, People's Republic of China.

The winner of the 2015 **ABU Engineering Industry Excellence Award** was Mr Zou Feng, President of the Academy of Broadcasting Science, People's Republic of China.

Mr Zou Feng of the Academy of Broadcasting Science, SAPPRFT-China, won the ABU Engineering Industry Excellence Award 2015 for his outstanding contributions to both the Chinese digital radio industry and terrestrial digital television. Mr Zou Feng has led the research and rollout of the China Digital Radio (CDR) system since 2007. He was also involved in the research work on testing, coverage and frequency planning of the terrestrial digital TV.





Mr DooHyung Kang of KBS-Korea and representing the KOBA, the sponsor of the award, presenting the award to Mr Mohammad

The 2015 winner of the ABU Green Broadcast Engineering Award was Radio Republik Indonesia.

Radio Republik Indonesia won the ABU Green Broadcast Engineering Award 2015 for using simple, low-cost technology in launching RRIPlay, an ICT product application. RRIPlay uses an IP VPN network that already existed, along with the existing computer in the studio and facilities that have long been used for RRI's network infrastructure.

The ABU Green Broadcast Engineering Award is sponsored by KOBA.







Ms Kiymet Erdal of TRT-Turkey and ABU Honorary Vice Chairman presenting the award to Mr S C Panda, of DD-India who accepted the award on behalf of the author,

Mr M S Duhan.

The winner of the Best Article Award for 2015 is Doordarshan-India for the article titled Experiences of Evolution of Digital Terrestrial Television in India authored by Mr M S Duhan.





**M** S Duhan









Sungchoon Park



Mr Hamid Dehghan Nayeri of IRIB-Iran and ABU Technical Committee Vice-Chairman presented the certificates for both the First and Second Commended Article prizes to Mr Dae Hoon, Choi of KBS-Korea who accepted on behalf of the authors.



Juhyun Oh

**Byungsun Kim Kisun Yang** 

The First Commended Article Prize has been awarded to Korean Broadcasting System for the article titled Real-time 3D Sign Language Avatar Animation from DTV Closed Captions authored by Mr Juhyun Oh, Mr Byungsun Kim, Mr Kisun Yang and Mr Sungchoon Park.











The Second Commended Article Prize has been awarded to Korean Broadcasting System for the article titled Terrestrial 4K UHD Live Broadcasting of Sports Events authored by Mr Injoon Cho, Mr Byungsun Kim, Mr Sangjin Hahm, Mr Sanghun Kim and Mr Sungho Jeon.







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Starting 1st June 2015, the new MCMC label replaces the hologram label for all communication devices sold in Malaysia. All communication devices sold in Malaysia must feature MCMC label. This label is to ensure that the communication devices are safe to use and does not interfere with frequencies used by other communication devices.

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# Announcing the next ABU Digital Broadcasting Symposium

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ABU Technology Department's Assistance to Members for the Implementation of Digital Broadcasting Services in the Asia-Pacific Region

**Major Forums** Digital broadcasting symposiums with implementation themes

**Seminars, Workshops, Webinars** Digital studio design workshops and technology seminars

**Safeguarding Broadcasting Spectrum** Representing the region on spectrum issues to ensure availability for digital services

#### **Techno-economic Studies**

Analysis of individual country readiness for digital broadcasting services and developing implementation roadmaps

#### **Technical Monographs**

Publication and distribution of technical monographs and reports on digital technology

**Digital Implementation Trials** Assisting members conduct trials for digital TV and Radio