



ABU DBS 2021

5 - 8 APRIL 2021 | E-HANDBOOK

UPDATED 7 APRIL 2021

Invitation to join the WorldDAB Asia-Pacific Technical Group



The WorldDAB Asia-Pacific Technical Group has been formed due to the growing interest in DAB+ across the APAC region. Dedicated to assisting broadcast radio industry stakeholders in the Asia-Pacific region implement DAB+, the group provides the following benefits:

- Information about DAB+ digital radio that is tailored to your country or region
- Assistance from experienced experts with DAB+ implementation
- Regular meetings – virtual and physical – taking place up to four times a year
- Discussions, learnings and collaboration on all technical aspects of DAB+

Who can join:

- Broadcasters
- Network providers
- Governments
- Regulatory bodies
- Equipment and receiver manufacturers and solution providers

WorldDAB Vice President and Chair of the WorldDAB Asia-Pacific Committee, Joan Warner:

“Through this Group WorldDAB will be able to plan and deliver practical, on the ground assistance to countries moving forward with DAB+.”



Chairman of the WorldDAB Asia-Pacific Technical Group, Dr Les Sabel:

“This group gives radio stakeholders in the region the opportunity to come together on a regular basis, and share knowledge, expertise and experiences on how to successfully implement and rollout DAB+ digital radio.”



To find out more and join this group, contact projectoffice@worlddab.org

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appreciation and
thanks to our sponsors.**

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PROGRAMME

5 April Monday Day 1

11:00-11:15	OPENING SESSION Welcome Remarks Dr Javad Mottaghi , Secretary-General, Asia-Pacific Broadcasting Union Opening Address YB Dato' Saifuddin Abdullah Minister of Communications and Multimedia Ministry of Communications and Multimedia Malaysia
11:15-12:15	Session 1 Advanced Technologies and Industry Developments Moderator: Masashi Kamei , ABU Technical Committee Vice-Chairman and Senior Research Engineer, NHK Science & Technology Research Laboratories, NHK-Japan Activities of ITU-R Study Group 6 for the future of broadcasting Dr Yukihiro Nishida , Executive Research Engineer (Fellow), Japan Broadcasting Corporation, NHK-Japan Digital Radio Technical Update – DAB, DRM, RadioDNS Lindsay Cornell , Principal Systems Architect, BBC Digital Emerging Your Media Strategy for the Next Generation Mardhiah Nasir , Vice President of Sales, IPSB Technology
12:15-12:25	<i>Session Break Sponsor Profiles</i>
12:25-13:25	Session 2 Business Strategies and Approaches for Broadcast and Media Moderator: Mardhiah Nasir , Vice President of Sales, IPSB Technology Embracing Digital Change – Strategies and Results Joan Warner , CEO, Commercial Radio Australia Deploying the DRM in full – AM and VHF (extended application and services) Ruxandra Obreja , Chairman, DRM Consortium Broadcasting via Satellite and OTT may not be a Zero Sum Game Prashant Butani , Senior Sales Director, MEASAT Satellite Systems Sdn Bhd
13:25-15:00	<i>Lunch Break Sponsor Profiles</i>
15:00-16:00	Session 3 OTT & IBB Technologies Moderator: Prashant Butani , Senior Sales Director, MEASAT Satellite Systems Sdn Bhd A technique to develop equivalent applications on various IBB systems: for expansion of broadcasting services considering interoperability and compatibility Dr Shinya Abe , Internet Service Systems Research Division, Science & Technology Research Laboratories, Japan Broadcasting Corporation Now that OTT has changed the game, a smart and smooth content supply chain is pivotal Ivan Verbesselt , VP Product Management, MEDIAGENIX Introducing a system for sending IP on DVB-T2 platform (OTT-B) Maryam Sedaghat , Senior Researcher, IRIB R&D, Iran
16:00-16:10	<i>Session Break Sponsor Profiles</i>
16:10-17:10	Session 4 Cloud Revolution in the media industry Moderator: Hamid Dehghan Nayeri , ABU Technical Committee Chairman, Director, International Technical Affairs & ABU Technical Liaison Officer, IRIB-Iran -DAB Head-End systems overview -Typical setups -Next generation & features Lars-Peder Lundgren , Marketing Director, Paneda. The Future of Terrestrial and Targeted Advertising Colin Prior , VP Sales – APAC, ENENSYS Technologies Enhancing Media Experience with Amazon Machine Learning Shweta Jain , APAC Head of Business Development, Media and Entertainment Amazon Web Services, Singapore

6 April Tuesday Day 2

11:00-12:00	<p>Session 5 Media Security & Disaster Preparedness Moderator: ABU Technology</p> <p>Security In The Media Supply Chain Ben Vandenberghe, CEO, Skyline Communications</p> <p>Activity of Disseminating EWBS Technology – Emergency Warning Broadcast System Yasuji Sakaguchi, Director, Broadcasting Systems Engineering, JTEC (Japan Telecommunications Engineering and Consulting Service)</p> <p>Use of Broadcast Technologies in Natural Crisis Management Negin Ayoughi, Senior Researcher, IRIB R&D, Iran</p>
12:00-12:10	Session Break Sponsor Profiles
12:10-13:10	<p>Session 6 AI and Big Data Applications in Media Moderator: Asaad Sameer Bagharib, Director, Thinking Tub Media</p> <p>Human Body Movement Detection and Simulation Using Artificial Intelligence Mohammad Nozari Pak, Senior Researcher, IRIB R&D, Iran</p> <p>The power of AI-driven remote video search for your creative teams Sam Bogoch, Cofounder & CEO, axle ai</p> <p>Content creation and editing tool using AI technology Michael Moss, CEO/ Co-Founder Promo Mii & Joe Goddard, Director, Asia Pacific, James & Wilkinson Media (JWM)</p> <p>A Deep learning based method for voice conversion in Persian Language Dr Amir Lakizadeh, IRIB R&D, Iran</p>
13:10-15:00	Lunch Break Sponsor Profiles
15:00-16:00	<p>Session 7 Technologies and Strategies for Successful Digital Radio Rollout Moderator: Steve Ahern, Head of ABU Media Academy</p> <p>Smart strategies for DAB+ Smart radio Dr Les Sabel, Chair, WorldDAB Asia Pacific Technical Group, and S-Comm Technologies</p> <p>DRM – Some Findings after the Recent DRM FM Trial in India Alexander Zink, Senior Business Development Manager, Digital Radio & Streaming Applications, Fraunhofer & Yogendra Pal, Hon. Chairman, DRM India Chapter</p> <p>Increasing Spectral Efficiency for VHF Band II by Transmitter Combining FM Digital Radio Signals Philipp Schmid, Chief Technology Officer, Nautel</p>
16:00-16:10	Session Break Sponsor Profiles



Workshop: Building radio audiences with DAB+

16:10 – 16:18	<p>Welcome and DAB+ status in Asia Pacific region Joan Warner, CEO Commercial Radio Australia and Chair, Asia-Pacific Committee, WorldDAB</p>
16:18– 16:26	<p>DAB+ global update and the case for DAB+ Patrick Hannon, President, WorldDAB and VP Corporate Development, Frontier Smart Technologies</p>
16:26 – 16:34	<p>DAB+ standards update Lindsay Cornell, Principal Systems Architect, BBC Digital and Chairman, WorldDAB Technical Committee</p>
16:34 – 16:42	<p>WorldDAB Asia Pacific Technical Group and support to broadcasters in the APAC region Dr Les Sabel, Chair, WorldDAB Asia Pacific Technical Group, and S-Comm Technologies</p>
16:42 – 16:50	<p>Getting DAB+ into cars Ron Schiffelers, Senior Director Program Management, NXP Semiconductors</p>
16:50 – 16:58	<p>Solutions available for affordable DAB+ consumer receivers Albert Tseng, CEO, Keystone Semiconductor Corp</p>
16:58 – 17:10	Q&A



- Free-to-air
- No data usage
- More choice
- Niche formats
- Targeted advertising
- Revenue opportunities
- Broad product range



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7 April Wednesday Day 3

11:00-12:00 **Session 8 | IP Technologies and Remote Production**
Moderator: **Aale Raza**, Director, Whiteways Systems Pte Ltd

Remote broadcast production - the new normal
Rahul Goyal, Country Manager India, Dalet

Real case studies of remote productions from reporter contribution to full remote productions
Peter Bruce, Director of Business Development, Elevate Broadcast Pte Ltd

UHD IP Studio Deployment, a real-world case study
Yew-jin Cheong, Director, Broadcast & Media, APAC, Rohde & Schwarz

12:00-12:10 *Session Break | Sponsor Profiles*

12:10-13:10 **Session 9 | Advanced Audio & Streaming Technologies**
Moderator: **Dr Les Sabel**, Chair, WorldDAB Asia Pacific Technical Group, and S-Comm Technologies

The object-based approach in Next Generation Audio (NGA)
Mohammad Reza Hasanabadi, Senior Researcher, IRIB R&D, IRAN

Streaming Radio Technologies - Dynamic Ad-Replacement, Podcasting and more
Aditya Summanwar, Director of Monetization, APAC, Triton Digital

Building a studio for immersive audio production, Dolby ATMOS
Geoffrey Low, Content Relations Manager SEA & ANZ, Dolby Singapore Pte Ltd

13:10-15:00 *Lunch Break | Sponsor Profiles*

15:00-16:00 **DRM Workshop | Digital Radio DRM Enables Distance Learning**

DRM is bringing for the first time a novel solution for distance learning during its practical workshop | "Digital Radio DRM Enables Distance Learning".

Introduction
Ruxandra Obreja, Chairman, DRM Consortium

Led by
Alexander Zink, Senior Business Development Manager, Digital Radio & Streaming Applications, Fraunhofer IIS,
Markus Tauber, Professional System Engineer, DRM/DAB ContentServer (CS)
Guido Leisker, Consultant Engineer.

Participants in the workshop will learn about
a. the technical basis for distance learning through DRM,
b. Journaline, audio services and scheduling specific to distance learning,
c. practical demo and d. hands-on scheduling for distance learning with DRM.



16:00-16:10 *Session Break | Sponsor Profiles*

16:10-17:10 **Session 10 | 5G Developments and Applications in Media**
Moderator: **Peter Bruce**, Director of Business Development, Elevate Broadcast Pte Ltd

5G Broadcast – a replacement for DVB-T2?
Dr Peter Siebert, IEEE BTS

5G Broadcast: Innovative Data Transmission Solution to Multiply NetworkCapacity
Parag Naik, CEO, Saankhya Labs Pvt Ltd

Future 6G Wireless Networks
Sepideh Ghandali, Senior Researcher, IRIB R&D, Iran



DIGITAL RADIO DRM ENABLES DISTANCE LEARNING

**7TH APRIL 2021
1500 - 1600 MYT**



8 April Thursday Day 4

11:00-12:00 **Session 11 | NextGen Technology Implementation**

Moderator: **ABU Technology**

HDR Video Assessment Approaches

Dr Mohieddin Moradi, Senior Researcher, IRIB R&D, Iran

Global Harmonization of NextGen TV Service

Yoshi Tsurimaki, Producer, Strategic Promotion Department, T-NET JAPAN Co., Ltd.

Latest Trends in Broadcasting: perspective of a Public Service Broadcaster

Mrs Anuradha Agarwal, ADG(Tech.), Prasar Bharati, India

12:00-12:10 *Session Break | Sponsor Profiles*

12:10-13:10 **Session 12 | Industry Debate – Panel Session**

“Overcoming the Pandemic - Learning from Experiences”

Moderator: **Shivane Thapa Basnyat**, Senior News Editor, Nepal Television

Sunil, Additional Director General (Engineering) & Head International Relations, Prasar Bharati-INDIA

Nguyen Duc Tue, Deputy Director General, Technical Production Center, Vietnam Television, Vietnam

Terence Yiu, Deputy Director of Engineering, Engineering Department, Broadcast Technology and Production Centre, Phoenix Satellite Television, Hong Kong-China

Peh Beng Yeow, Lead, Technology Operations, Mediacorp, Singapore

Dr Tharaka Mohotty, Director Engineering, MBC Networks & MTV Channel, Sri Lanka

Kazim Pektas, Chief Engineer, Studio Planning Department, Turkish Radio Television Corporation, Turkey

13:10-15:00 *Lunch Break | Sponsor Profiles*

15:00-16:00

Dalet Remote Editing | Edit & Collaborate from anywhere

How do you enable remote workflows quickly and securely, empowering content creators to access familiar production tools anywhere?

Join us for a workshop where we will discuss and demonstrate how Dalet addresses remote production and editing workflows.

Speakers |

Pierre Roussel, Pre-Sales Engineer Dalet,

Rahul Goyal, Country Manager, India, Dalet



What you'll learn |

- How you can edit News, Sports, or Promos remotely, including audio, video and multimedia with Dalet OneCut - Dalet's versatile remote editing tool.
- How remote news producers can remain operational while away from the production hub, anytime, anywhere with Dalet On-the-Go, Dalet's mobile app for remote production.
- How you can integrate your newsroom system with creative tools such as Adobe Premiere Pro and ensure collaborative workflows.

16:00-16:10 *Session Break | Sponsor Profiles*

16:10-17:10 **Session 13 | Advances in Media Delivery – Platforms and Strategies**

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

The Future of Media Delivery

Emily Dubs, Head of Technology, DVB Project Office

Unifying segment delivery for LL-HLS and LL-DASH with byte-range addressing

Yin Loong CHAO, Enterprise Architect, Akamai, Singapore

The Future of OTT in Malaysia - Strategies for Broadcasters

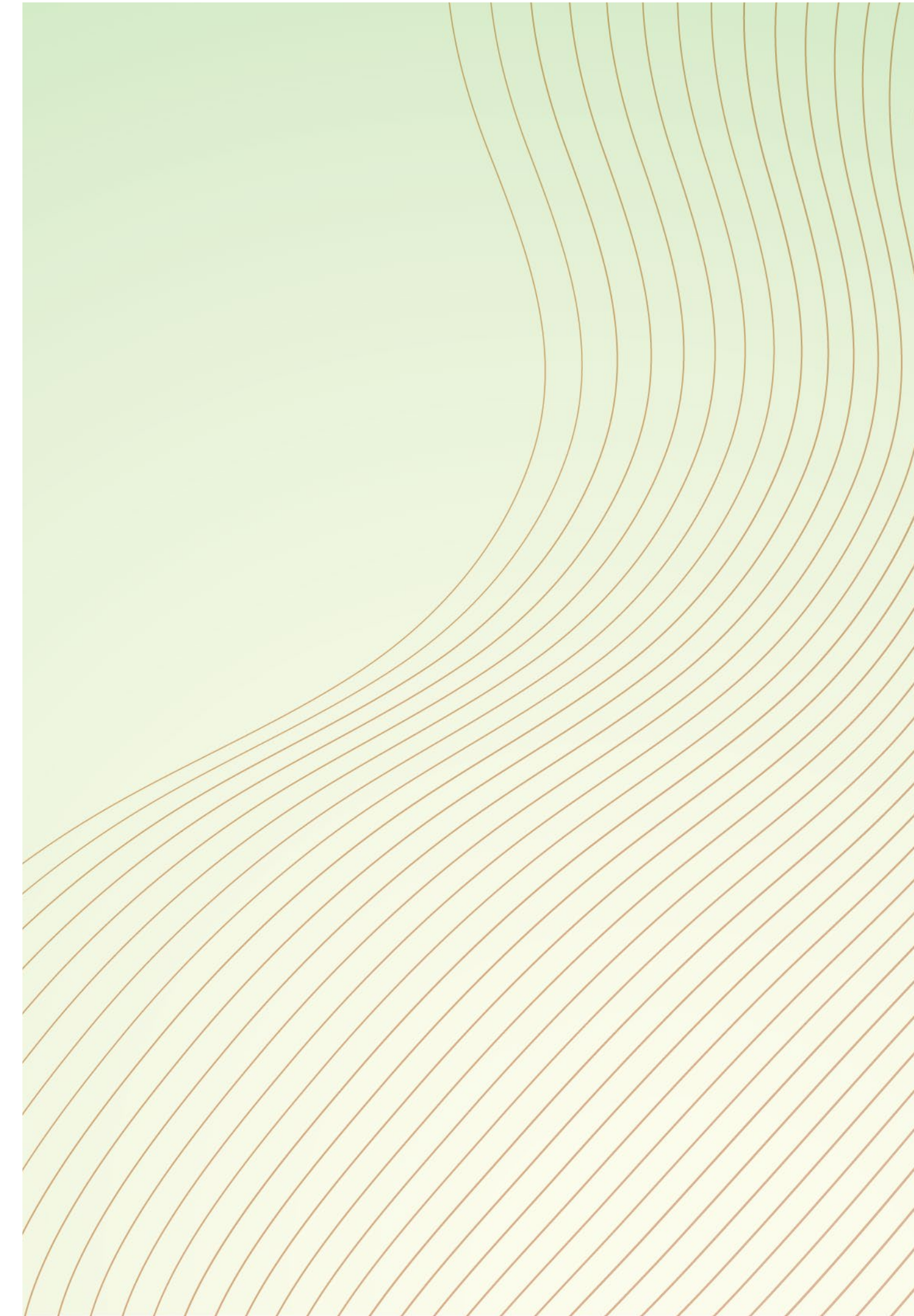
Greg Armshaw, Senior Solutions Director, Asia, Brightcove

17:10

Closing

Dalet Remote Editing

Edit & Collaborate
from anywhere



SPEAKERS



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

Dr Javad Mottaghi assumed the office of Secretary-General of the Asia-Pacific Broadcasting Union (ABU) in May 2010. Before joining the ABU, he was Director of the Asia-Pacific Institute for Broadcasting Development (AIBD) for 12 years. He possesses 37 years of experience in media/communication, international partnership facilitation, media development, in ICT utilization, capacity building, networking, research, negotiations, fund raising, news and programming for radio and television, social and cultural television programme production and sports coverage.

Dr Mottaghi was awarded the Elizabeth R Award for Exceptional Contribution to Public Service Broadcasting and received a "Special Lifetime Achievement Award" in May 2010 in recognition of his contributions to the Asia – Pacific Institute for Broadcasting Development (AIBD); His past roles include: Vice Minister of the Sports for Sports & Federations (1989-1992), Deputy to President of the National Olympic Committee of Iran in International Affairs, until 1979, Chairman of the Technical Swimming Committee for the Asia Amateur Swimming Federation, (1980-1981) and Secretary-General of the Iranian Swimming Federation (1982-1998). He holds a Ph.D. from the University of Teesside in England and a Bachelor's degree in Mechanical Engineering from Tehran Sharif University of Technology.

Dr Yukihiro Nishida, Executive Research Engineer (Fellow), Japan Broadcasting Corporation, NHK-Japan

Dr Nishida is an executive research engineer (Fellow) at the Science and Technology Research Laboratories, Japan Broadcasting Corporation (NHK), Tokyo, Japan. He has been involved in the research and development of many areas of broadcasting technologies, including high-definition television (HDTV), ultrahigh-definition television (UHDTV), high-dynamic range television (HDR-TV), and digital broadcasting. He is also active in the standardization of broadcast technologies in the International Telecommunication Union – Radiocommunication Sector (ITU-R) and the Association of Radio Industries and Businesses (ARIB), Japan. He has been the chairman of the ITU-R Study Group 6 since October 2015.



Lindsay Cornell, Principal Systems Architect, BBC Digital

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

Mardhiah Nasir, Vice President of Sales, IPSB Technology

Mardhiah is currently the Vice President of Sales at IPSB Technology. Her role at IPSB Technology is managing all Sales related activities of the company including supervising all client's technical requirements. Mardhiah joined IPSB in 2011 and holds a Bachelor's Degree in Information Technology. She oversees our national and international business plans by analyzing market trends. This results in IPSB's future thinking of products and solutions. Mardhiah prefers and thrives in an environment that empowers her to make key decisions that ultimately drive success.



Joan Warner, CEO, Commercial Radio Australia

As CEO of Commercial Radio Australia (CRA) Joan was responsible for the planning, roll-out and implementation of DAB+ digital radio in the five metropolitan capitals covering over 60% of the Australian population and continues the DAB+ implementation for commercial radio broadcasters across regional Australia. She oversees the whole of industry marketing campaign, Radio Codes of Practice, audience survey contracts and industry copyright agreements. She is responsible for the annual National Commercial Radio Conference, Siren Creative Awards and Australian Commercial Radio Awards.

Ruxandra Obreja, Chairman, DRM Consortium

Ruxandra Obreja has been the Digital Radio Mondiale (DRM) Consortium Chairman since 2008. She is representing and enjoying the support of both Encompass (US) and the BBC (UK) on the Steering Board of the Consortium, a not-for-profit international organisation with members on all continents. In the last few years Ruxandra has been deeply involved in the promotion of digital radio all over the world, after a career spent at the BBC World Service where she worked as a journalist, editor, commissioner of English programmes and as Head of Business Development World Service. She studied in Romania and UK, writing, presenting, and producing for radio and TV. In March 2008 Ruxandra was first elected Chairman of the DRM Consortium with the avowed aim of ensuring that the various stakeholders work towards the same goal: the global and mass scale take up of the DRM standard. Ruxandra has spoken at key broadcasting conferences, has organised and run workshops, conferences and written articles promoting digital radio and DRM on all continents. She has been given an important Romanian award for her work in the media and has accepted an ITU award on behalf of the DRM Consortium.



Prashant Butani, Senior Sales Director, MEASAT Satellite Systems Sdn Bhd

Prashant H. Butani is MEASAT's Senior Sales Director. In his role, Prashant supports pre-sales, sales, post-sales and online & offline marketing activities of MEASAT's satellite services. He has over 15 years of experience in the satellite and telecommunications industry in pre-sales, project management, market research, strategy consulting and business development. Prashant holds a B.E. (Information Technology with Satellite Communications) from Mumbai University. He has also completed a Masters of Science in Satellite Communications Engineering from University of Surrey, United Kingdom.

Dr Shinya Abe, Internet Service Systems Research Division, Science & Technology Research Laboratories, Japan Broadcasting Corporation

Shinya Abe received B.Eng., M.Eng., and Dr.Eng. degree from Waseda University in 2011, 2012 and 2015, respectively. He joined NHK (Japan Broadcasting Corporation) in 2015. Since 2018, he has been studying system architecture of Integrated Broadcast-Broadband systems including enhancement of user experience (UX) with the services using various IoT devices at NHK Science and Technology Research Laboratories. He actively participates W3C's Web of Things meetings and contributed some technologies. Besides, he is also interested in UX enhancement by contextual understandings by the application, caption technology, and more.



Ivan Verbesselt, VP Product Management MEDIAGENIX

Ivan Verbesselt is Chief Product Officer with MEDIAGENIX. He gratefully looks back on an exciting business, marketing and technology journey through Telecoms, Internet, Digital Media and Security. Ivan has held positions as SVP Group Marketing at NAGRA-Kudelski and VP Product Marketing and CTO for broadband at Alcatel where he was also the VP & GM that created and scaled up the IPTV business. Ivan started his career in telecoms with Alcatel Research where he enjoyed contributing to the design and go-to-market of several category defining products in the broadband internet space which naturally led him to assume a range of product management positions both as a technology vendor and as a service provider. Ivan Verbesselt holds a Master of Science in Applied Physics and Electronic Engineering from Brussels University, an Executive Degree in Business Administration from Solvay Business School (CEPAC) and he is a certified digital marketing professional. He is a frequent industry speaker and has also been active as a guest professor in Marketing at the International University in Geneva. In his free time he enjoys endurance sports, skiing, tennis, cooking and playing jazz saxophone.

Maryam Sedaghat, Senior Researcher, IRIB R&D, Iran

Maryam Sedaghat has been working at IRIB R&D as a senior researcher and project manager since 2000 up to now and holds a bachelor's degree in electrical engineering-telecommunication in 1999, and a Master of Science in the same major in 2007. Her activities are in the field of distribution & contribution (DMNG, Microwave Link, SDH Radio, Video Gateway with IP trunk, etc.), digital television broadcasting (DVB-T/T2, DVB-S/S2/S2X), and digital radio broadcasting (DAB, DRM, ISDB) from the point of view standards, equipment and implementation. She also recently researches hybrid systems and integrated between broadcast and broadband e.g. ATSC 3.0, MMT, DVB-I, and especially OTT-B and its benefits and challenges for IRIB.



Lars Peder Lundgren, Marketing Director, Paneda

Lars-Peder has a degree in Applied Technology from the University of Linköping. He fell in love with DAB 1997 when he was involved in the first DAB trials, and since that he has been involved in a great number of DAB installations in over 40 countries. Today, as Marketing Director for Paneda, he spends most of his time to promote DAB technology world-wide.



Colin Prior, Asia Pacific Sales Manager, Enensys Technologies

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



Shweta Jain, APAC Head of Business Development, Media and Entertainment Amazon Web Services, Singapore

As APAC Head of Business Development, Media and Entertainment, at AWS, Shweta works closely with media organisations on their strategy to leverage cloud for their most critical workloads. Having worked in media industry for two decades in leadership roles across technology and new business initiatives, Shweta has a deep understanding of the challenges as well as the innovation which the industry thrives on.



**Ben Vandenberghe, CEO, Skyline Communications**

Ben Vandenberghe, CEO at Skyline Communications, is one of the industry's thought leaders and visionaries in the area of end-to-end network management and orchestration software solutions for the media, entertainment and service provider industry. Under Ben's leadership, Skyline Communications has grown into the acknowledged global leader in this field. Skyline's renowned flagship DataMiner software platform, widely acclaimed for its far-reaching innovation track record, is one of the key driving technologies behind many of the world's most prestigious media, entertainment and service provider operations.

Yasuji Sakaguchi, Director, Broadcasting Systems Engineering, JTEC (Japan Telecommunications Engineering and Consulting Service)

Yasuji Sakaguchi joined the Japan Broadcasting Corporation (NHK) in 1989. He had long been in charge of digital transition of terrestrial broadcasting in Japan. In September 2009, he was appointed as an advisor for implementation of Digital Broadcasting in Peru. He originated a new EWBS (Emergency Warning Broadcast System) standard better suited in Latin America including "Superimpose" closed caption function. In June 2018, he was transferred to JTEC works as a consultant of digital broadcasting technology.

**Negin Ayoughi, Senior Researcher, IRIB R&D, Iran**

Negin Ayoughi received the B.Sc. degree in computer science from the University of Isfahan, in 2014, and the M.Sc. degree in computer science from Sharif University of Technology, Tehran, Iran, in 2017. In 2018, she joined the R&D Department of Islamic Republic of Iran Broadcasting (IRIB), as a Senior Researcher. Her research interests are in machine learning approaches to data analysis, distributed artificial intelligence, and cloud computing services and DevOps. Some of her projects include business intelligence within the broadcasting industry, virtualization of radio production and playout, design and developing web applications for interactive TV based on HbbTV standards, and coordination of crisis management operations in multi-platform broadcast-broadband systems.

Asaad Sameer Bagharib, Director, Thinking Tub Media

Asaad Sameer Bagharib is a veteran of the media industry having spent more than 30 years in MediaCorp, Singapore, one of Asia's leading media broadcast organisations. His last appointment was Senior Vice President of Technology Business. In that role, he was responsible for the provision of media technology solutions and project consultancy & management in Singapore and the region. After leaving MediaCorp in Sept 2013, Asaad set up his own company, S&S Solutions Pte Ltd, to provide media technology consultancy and services. He is also a Director of Thinking Tub Media Pte Ltd which provides end-to-end OTT platform services to the region.

**Mohammad Nozari Pak, Senior Researcher, IRIB R&D, Iran**

Mohammad Nozari Pak, Senior Researcher at IRIB R&D, is working on novel video coding and machine learning algorithms based on artificial intelligence. This reflects his interest in the application of machine learning in video. His job experience includes inpainting and super resolution with Python programming. He holds an M.Sc degree in Telecommunication – Electrical Engineering in the field of Image Processing and is continuing to study Electrical Engineering at IRIB University.

**Sam Bogoch, Cofounder & CEO, axle ai**

Sam Bogoch spent five years in director-level product design, product management and business development roles at Avid. Sam's exclusive focus was Avid's Interplay product line, which he helped grow from a very early 1.1 version into an industry leader. With axle ai, Sam brings years of media management experience to an emerging market of teams around the world in need of simple tools to manage their media.

Michael Moss, CEO/ Co-Founder Promo Mii

CEO and Co-Founder Michael Moss is a multiple start-up founder, having founded 4 companies in the last 12 years - his first one being when he was 21. Michael's background is in finance, however his ultimate motivation in life is to help bridge the gap between creativity and business with technological innovation. After finding a niche in the market, Michael decided to start PromoMii in 2016. He is a frequent keynote speaker at media & entertainment industry events such as PromaxBDA, Media Fast Forward, EBU and IBC.

**Joe Goddard, Director, Asia Pacific, James&Wilkinson Media (JWM)**

Joe is an international Marketing & Business Development Director with 13 years' experience in strategy, consulting and training within the broadcast sector. He previously spent many years at Viacom International Media Networks and now, based in Singapore, leads the JWM business for the Asia Pacific region.

Steve Ahern, Head of ABU Media Academy

Before joining the ABU, Steve worked as a journalist, broadcaster, programmer and manager in radio, tv, and online media, and was the Director of Radio at Australia's elite media university AFTRS. He has been at the forefront of new media content delivery and has taught broadcasters around the world techniques and business strategies for the new media age. In 2009, he received an Order of Australia Medal (OAM) for his services to media and training.

**Dr Les Sabel, Chair, WorldDAB Asia Pacific Technical Group, and S-Comm Technologies WorldDAB**

Les has over 30 years of experience in communications systems, including broadcast digital radio (DAB/DAB+ and DRM), mobile communications, wireless broadband and satellite communications. Les founded S-Comm Technologies Pty. Ltd. in 2008 to work with the radio industry on DAB+ digital radio. S-Comm provides independent engineering consultancy to WorldDAB, the ITU and broadcasters, regulators, network operators and equipment suppliers in Australia, South East Asia and around the globe.

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

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

**Yogendra Pal, Hon. Chairman, DRM India Chapter**

Yogendra Pal is the Honorary Chairman of the India Chapter of DRM Consortium, the international not-for-profit organisation which has been created for the development and implementation of the DRM standard for the digitisation of the terrestrial radio transmissions. He is also the honorary member of Board of DRM Consortium. He was Advisor with the Ministry of Information & Broadcasting, for the implementation of Digitisation Addressable System (DAS) in the Cable TV network in the country and was closely associated with the strengthening of the Community Radio network in the country. He superannuated from All India Radio & Doordarshan as Additional Director General after over 36 years of glorious service and was associated with implementation of state-of-the-art fully digital studio setup (New Broadcasting House) in Delhi; News-on-Phone, Internet and AIRNET services and networking of AIR stations. He is the life fellow of Broadcast Engineering Society (India) and Institution of Electronics & Telecommunication Engineers.

Philipp Schmid, Chief Technology Officer, Nautel

Philipp Schmid, P.Eng., M.Eng., joined Nautel Ltd in 2005 has earned multiple patents during his tenure with the organization. He was recognized in 2017 by the National Association of Broadcasters for "best paper" at the BEITC (Broadcast Engineering and Information Technology Conference). Recent projects have included research and testing of all-digital AM (DRM & HD Radio); extended HD Radio FM service modes; Nautel HD Multiplex™, with up to 15 HD channels on one transmitter; and the development of IP STL technologies for HD Radio. In 2019 Philipp assumed the role of Chief Technology Officer at Nautel and is continuing to research digital radio broadcasting.

**Patrick Hannon, President, WorldDAB and VP Corporate Development, Frontier Smart Technologies**

Patrick Hannon is Vice President Corporate Development at Frontier Smart Technologies, the leading provider of technology solutions for consumer DAB radios. He was elected President of WorldDAB in November 2013. His role is to work with policymakers, regulators and industry players (including public and private broadcasters, network operators, device manufacturers, retailers and automotive manufacturers) to ensure that digital radio is successfully rolled out in as many territories as possible. Before joining Frontier, Patrick was a strategy consultant focused on broadcast and digital media. Previously, he held senior strategy and commercial roles at the BBC and BBC Worldwide.

Ron Schifflers, Senior Director Program Management, NXP Semiconductors

Ron Schifflers works for NXP within the Business Unit Automotive. NXP is a semiconductors company and a leader in the Car Infotainment IC market. Having a total experience of 21 years in the semiconductors industry Ron has been working on car radio products with his main focus on digital radio for the past 9 years from product definition to design-in at customers. Besides this he is also active as member of the WorldDAB steering board.

**Albert Tseng, CEO, Keystone Semiconductor Corp, NXP Semiconductors**

Albert Tseng is the CEO of Keystone Semiconductor Corp. Keystone provide DAB+/FM IC modules to major DAB digital radio brands and regard themselves as not just a device vendor but also as a service provider – helping their customers optimize receiver sensitivity and review their circuit and reference designs for DAB signal processing.



Rahul Goyal, Country Manager India, Dalet

Rahul has been with Dalet for over 9 years in various roles. Most recently he's been Country Manager for India, Thailand and Malaysia working with major accounts like TataSky, Mathrubhumi News, Sony, Zee, Media Prima and Times Network. He started the operations for Dalet in other SAARC countries like Bangladesh and Sri Lanka. Before moving into a sales role he spent several years as Project Engineer and Solutions Architect, from which he gained a deep technical understanding of the Dalet solutions.

He significantly contributed to large projects like MBC Dubai or Media Corp. Before Dalet, he was a Broadcast Engineer for several international broadcasters in the Middle Eastern and APAC region. Rahul holds a broadcast engineering degree from Kurukshetra University in India.

Peter Bruce, Director of Business Development, Elevate Broadcast Pte Ltd

Peter Bruce is a 30+ year veteran of the broadcast and media industry. He started his career in a production studio at Digital Visions, Austria. Peter has worked with the innovative pioneering companies such as AMPEX, Sony Broadcast and BTS / Philips Broadcast/ Grass Valley in the APAC region. Establishing the IABM APAC regional office in Singapore of which he ran for 6 years.



Peter is now the Director of Business Development for Elevate Broadcast in Singapore. Developing business from their range of eCommerce, eLearning Platform, Systems and Production Services.



Mohammad Reza Hasanabadi, Senior Researcher, IRIB R&D, IRAN

Mohammad Reza Hasanabadi works as a researcher at IRIB R&D. He received His M.S. degree in Audio Engineering from IRIB UNIVERSITY in 2016. He is currently pursuing a Ph.D. in Electrical Engineering at Shahid Beheshti University (SBU), Iran. He joined IRIB R&D in 2019 and since then he is focusing on audio-related broadcast projects. His research interests include audio and speech processing, coding, and estimation theory.

Aditya Summanwar, Director of Monetization, APAC, Triton Digital

As Director of Market Development at Triton Digital, Aditya Summanwar leads the expansion and utilisation of Triton's preeminent streaming audio and podcast technology in South Asia and South East Asia. With more than 23 years of experience in the media and entertainment industry, Aditya has been instrumental in propagating the adoption of Triton's audio distribution, measurement and monetisation products with the largest and most respected audio publishers in the region.



Aditya has vast knowledge and experience across streaming audio, radio, television, print and telecom, having launched several successful B2C and B2B products and services at companies like Astro in Malaysia, Mahaka Radio in Indonesia, Radio Mirchi, and Red FM and Star TV in India. His extensive experience across technology and business give him the unique ability to help digital audio publishers achieve their goals in a consultative and collaborative manner. In harnessing the region's potential, Aditya also works with agencies, brands and publishers to unlock liquidity in the digital audio ecosystem by building structured programs that inform and educate the market value-chain about the benefits and advances in the space.



Pierre Roussel, Pre-sales Engineer, APAC Dalet

Pierre Roussel is Senior Technical Engineer with over ten years of experience in the broadcast/IT industry. Currently serving as a Presales Engineer at Dalet Asia Pte Ltd bringing expertise in the APAC division to design and deliver new solutions for a variety of businesses.



Markus Tauber, Professional System Engineer, DRM/DAB ContentServer (CS)

Markus Tauber serves as a professional system engineer focusing on development and improvement of the DRM/DAB ContentServer (CS), a Digital Radio Studio Head-End. He makes innovative and user driven contributions to CS to ensure the market and industry demands. He also leads the task of integrating the CS at major broadcasters across the globe.

Guido Leisker, Consultant Engineer

Guido Leisker has a long background in digital radio. He worked as a senior system engineer in the Audio and Media Technologies division at Fraunhofer IIS, Germany with a focus on the development and promotion of professional broadcast technologies for almost 10 years. The role also included work with major broadcasters and industry partners across the globe. Today he serves as a freelance engineer and technology consultant. A significant focus is supporting Fraunhofer's digital radio related projects and activities as an external consultant



Dr Peter Siebert, Adcom member, IEEE BTS

Dr Peter Siebert's career spans 35 years. He has held various positions within the Broadcast industry, most recently he was the Executive Director at the DVB Project Office in Geneva, where he was responsible for all organizational and technology related aspects of the DVB. Prior to this with Siemens AG, he was influential in the design of the end-to-end IPTV and set-top box solution; at SES-ASTRA he was instrumental in the introduction of digital television via satellite for Europe, based on the DVB/MPEG-2 standards; and at Philips Kommunikations AG, he managed digital audio and visual transmission.



His involvement has been on all aspects of audio-video transmission such as video transmission over telecommunication networks (PDH/SDH), satellite and IPTV networks. He was responsible for a number of ETSI specifications in the area of satellite transmission as well as for DVB standards. He holds several patents for various aspects of audio and visual data transmission.

Dr Peter Siebert received his M.Sc. degree in 1984 and his Ph.D. degree in 1989 in physics from the University in Frankfurt, Germany. In addition he holds a degree in economics from the University in Hagen, Germany and an MBA from the Open University Milton Keynes, UK. He is a Senior IEEE Member and an elected Adcom member of IEEE Broadcast Technology Society (BTS). As of May 2020 he is Guest Research Professor of Shanghai Jiao Tong University.

Sepideh Ghandali, Senior Researcher, IRIB R&D, Iran

Sepideh Ghandali is a senior researcher in the IRIB R&D. She obtained a master's degree in electrical-telecommunication engineering from Amirkabir University of Technology (Tehran Polytechnic) and is currently a PhD candidate in electrical-telecommunication-system engineering at Semnan University and focuses on high bit rate transmission in sixth generation telecommunication networks using massive MIMO technology. She has been working in the IRIB R&D since 2010. During this time she has been working in the field of Contribution and Distribution in signal Transmission, Terrestrial and Satellite Broadcast, new platforms for signal transmission such as high throughput satellite IP, LTE-Broadcast, 5G and 6G.



Dr Mohieddin Moradi, Senior Researcher, IRIB R&D, Iran

Dr Mohieddin Moradi is working in the IRIB R&D department. His specialty is designing studios and OB systems, video and digital image processing, video coding, artificial intelligence. His executive and scientific experiences include supervising the video technical laboratory, the director of video technical affairs of the IRIB technical department of audio and video, teaching undergraduate courses such as electronics, television systems, and video equipment, as well as graduate courses such as video coding and digital image processing.

Yoshi Tsurimaki, Producer, Strategic Promotion Department, T-NET JAPAN Co., Ltd.

Mr Yoshi Tsurimaki worked for TV production over 15 years and had been creating datacasting contents, related systems and on air operation tools as technical director and producer. Mr Tsurimaki was a Japan delegate Official member of the ASEAN-JAPAN IBB workshop and Steering Committee Member of AWARN (Advanced Warning Response Network:US). As Technical Director he was responsible for HTML5 datacasting contents creation and related system development. As Producer he provided support service for the development of the national TV station of the Philippines and Botswana including emergency warning broadcasting service. As a Researcher Mr Tsurimaki was involved in Web and TV trends and specifying targeting element for standardization in the next generation TV technology and research on the possibility of overseas deployment of Next-Gen TV apps.



Shivane Thapa Basnyat, Senior News Editor, Nepal Television

Shivane Thapa Basnyat is a Senior News Editor at Nepal Television. She holds over 15 years of experience in broadcast journalism with issues relating to politics and international relations being her areas of interest. Her experience also includes production of news & current affairs programs, documentaries as well as PSA's among others. In the truest spirit of a broadcaster, she has done it all. From hosting news programs and interviews on contemporary

issues, reporting from the earthquake hard-hit areas & historic constituent assembly elections in Nepal to sports commentary she has been on the scene. She is one of the most sought after moderators and master of ceremony for national and international events in Nepal. Besides, she is also invited to host important events abroad. Recently she hosted the Global Gathering of United Nations for Scaling Up Nutrition.

Bernie O'Neill, Project Director, WorldDAB

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



Yin Loong CHAO, Enterprise Architect, Akamai, Singapore

Chao Yin Loong has more than 20 years experience in the broadcast and OTT industry. He started his career at Mediacorp Singapore where he implemented the first DVB-T system in South East Asia. He has also worked for Rohde & Schwarz where he was a trainer and evangelist for various broadcast technologies like DVB-T2, encoding systems, IMF and various others. He was also a speaker at the 2014 and 2020 ABU DBS conference. Currently he works for Akamai Technologies as an Enterprise Architect.

He focuses on helping major broadcasters in their optimising their OTT setup and their workflow and delivery.

**Emily Dubs, Head of Technology, DVB Project Office**

Emily took up her current position as Head of Technology in January 2020, coming to DVB with 20 years' experience in the digital television industry. She has worked with several DVB Members across a variety of roles, including with Thomson Video Networks (Harmonic), TeamCast (ENENSYS Technologies) and SmarDTV/Neotion. Emily has strong expertise in the traditional broadcast world along with a solid grounding in emerging technologies from the broadband world. As Head of Technology,

Emily leads on all technical and standardisation matters within DVB, represents the organisation around the world at conferences and tradeshows and supports DVB's modules and working groups.

Greg Armshaw, Senior Solutions Director, Asia, Brightcove

As Senior Solutions Director for Brightcove across APAC, Greg consults with media and broadcast companies helping them build their video streaming businesses. He has more than 20 years of experience in advertising, digital marketing, and has rich experience in building consumer offerings in the technology, media & telecom sector in Asia. Greg is based in Singapore.



As a consultant and strategist, Greg has led Brightcove to achieve a dominant market position in the region with digital-first companies, Free to Air TV and Pay TV content owners. He is a regular commentator on industry topics, especially on the opportunity for premium publishers to build new competencies in digital, by driving real value for advertising partners.

Prior to Brightcove, Greg held various senior management and mentor roles at Universal McCann, McCann WorldGroup, Chinaccelator, and as an OTT advisor to Asia Video Industry Association (AVIA).

**Masashi Kamei, ABU Technical Committee Vice-Chairman and Senior Research Engineer, NHK Science & Technology Research Laboratories, NHK-Japan**

Masashi Kamei, ABU Technical Committee Vice-Chairman and Senior Research Engineer, NHK Science & Technology Research Laboratories Masashi Kamei joined NHK in 1997 and currently belongs to Science & Technology Research Laboratories. His research field is satellite broadcasting system. He is a vice chairman of ABU Technical committee since 2018.

Hamid Dehghan Nayeri, ABU Technical Committee Chairman, Director, International Technical Affairs & ABU Technical Liaison Officer, IRIB-Iran

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

**Dr Amir Lakizadeh, IRIB R&D, Iran**

Amir Lakizadeh received PhD in Computer Engineering from Tarbiat Modares University and is currently works as Head of AI at IRIB R&D. His professional interests focus on Machine Learning, Deep Learning and his current projects include applying deep learning based methods for processing multimedia data. Some of his projects are voice conversion, face detection and recognition, image-super resolution, etc. In addition, he works as faculty member in Computer Engineering department in university of Qom.

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

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

Geoffrey Low, Content Relations Manager SEA & ANZ, Dolby Singapore Pte Ltd

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

**Parag Naik, CEO, Saankhya Labs Pvt Ltd**

Parag Naik is a technology serial entrepreneur with almost 30 years of industry experience, with 2 decades in indigenous high technology startups. He co-founded Saankhya Labs, India's first private fabless semiconductor company, in 2007. Parag is considered one of the foremost experts in the world on Software Defined Radios (SDR) and Cognitive Radios. He is a named inventor on 40+ international patents in the areas of VLSI design, CPU/SDR architecture, Digital Communications, Signal Processing and Hardware-Software Co-design/ Code generators. Most recently he was chosen by Economic times as one of the "50 promising entrepreneurs in India-2020".

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

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

**Nguyen Duc Tue, Deputy Director, Technical Centre, Vietnam Television**

Mr Nguyen Duc Tue has been an Information Technology Engineer from 1995 and obtained his MSc in Computer Science in 2001. He has worked for VTV for over 20 years as system engineer, technical support and project manager. He is now the Deputy Director General of the Technical Production Centre. He focuses on file-based workflow design and is the project manager in the production area at VTV.

**Dr Tharaka Mohotty, Director Engineering, MBC Networks & MTV Channel, Sri Lanka**

Dr Tharaka Mohotty has 31 years' experience working for national and private broadcasters as a chief engineer. His areas of expertise include studio (sound and vision), off-line, outside broadcast, transmission and master control operations. He is well versed in broadcasting installations, upgrades and providing training through working with broadcasting equipment manufacturers and solutions providers around the world. A specialist in complex digital broadcasting systems, including broadcast control, Dr Mohotty has been a leading member of the National Roadmap Team in Sri Lanka. He was also a long-time chairman of the ABU Study Topic Group on Capacity Building and continues to be closely involved in ABU technical activities.

Terence Yiu, Deputy Director of Engineering, Phoenix Satellite Television, Hong Kong-China

Terence Yiu received his BEng in Electronic Engineering from Hong Kong University of Science & Technology in 1994. He then received his MSc in Electronic Engineering with Distinction from City University of Hong Kong in 2000. He is currently the Deputy Director of Engineering of Phoenix Satellite Television Co. Ltd. Terence has more than 20 years' experience as a professional engineer in broadcast industries. He is a Chartered Professional Engineer of IET (CEng), Corporate Member of Hong Kong Institution of Engineers (MHKIE), Section Manager of SMPTE Hong Kong. He is a Bureau Member of the Asia-Pacific Broadcasting Union (ABU) Technical Committee. He used to be a Member of Radio Spectrum & Technical Standard Advisory Committee of Hong Kong.

**Peh Beng Yeow, Lead, Technology Operations, Mediacorp, Singapore**

Mr Peh has been heavily involved in digital broadcasting technology since 1999. Currently, he is the Lead, Technology Operations and he is responsible for planning and executing projects related to TV and radio transmission system. Mr Peh holds a Master of Business Administration (Strategy), a Master of Engineering Degree, a Master of Science Degree (Communication Network System) and a Bachelor Degree in Electrical and Electronics Engineering.

**Mr Sunil, Additional Director General (Engineering) & Head International Relations, Prasar Bharati-INDIA & ABU Technical Committee Vice-Chairman**

Mr Sunil is serving as the Additional Director General with India's Public Service Broadcaster Prasar Bharati having twin verticals of All India Radio and Doordarshan and is heading the International Relations, Global Outreach, Marketing, Distribution and Central Archives Division at the Corporate level. He has a B.Tech and MBA in Finance from FMS Delhi and until recently headed the Planning Wings of Transmitters & Satellite Divisions of Doordarshan. With over three decades experience in the field of Broadcasting, Mr. Sunil has essentially worked with the installation of Broadcasting Projects in India including the coveted Houses of the Indian Parliament, and in almost 25 countries across the world, covering the domain of High Definition TV Studios, Digital Transmitters and Satellite Uplinking Earth Stations. He has been responsible for Capital Procurements of all Broadcast equipment for the public broadcaster. He has been a Member of the Technical Advisory Group of ICC (INSAT Coordination Committee) of the Indian Space Research Organisation (ISRO) and has also served as Secretary of the Broadcast Engineering Society of India. A winner of the 2018 ABU Broadcast Engineering Excellence Awards, he is currently the Vice Chairman of the ABU Technical Committee for the term 2018-2020. Mr Sunil is also one of the International Judges of the Association of International Broadcasters (AIB) UK for the year 2020. Mr Sunil has represented India's Public Service Broadcaster and the Ministry of Information and Broadcasting in numerous conferences across the world.

**Kazim Pektas, Chief Engineer, Studio Planning Department, Turkish Radio Television Corporation, Turkey**

Mr Kazim Pektas graduated from Karadeniz Technical University, department of Electronics Engineering. He joined TRT in 1998 and worked as a maintenance engineer for about 10 years. He has worked as a planning engineer at the Studios and Program Transmission Systems Department and has been involved in many television studios and master control systems planning, installations and testing.

Mrs Anuradha Agarwal, ADG(Tech.), Prasar Bharati, India

Anuradha Agarwal, a member of the Indian Broadcast (Engineers) Service is currently Additional Director General (Tech), Prasar Bharati, India. Mrs Anuradha has contributed immensely in the introduction of new technologies in broadcasting and technical inputs to International Conferences on Sound and Television Broadcasting. She has been closely associated with development of DTH Radio and DVBT-2 Radio besides Telemetry System for MW/FM transmitters and Reception Survey of various transmitters for AIR & TV.



WORKSHOP LISTING



WorldDAB is the global industry association responsible for defining and promoting DAB/DAB+. Our membership is drawn from all elements of the radio ecosystem, including broadcasters, regulators, car makers, network operators, technology providers, equipment providers and receiver manufacturers.

WorldDAB's membership includes 1300+ experts from over 100 member organisations and 33 countries. Using our network, and in partnership with other industry bodies such as ABU, we facilitate collaboration amongst key radio stakeholders, and provide support and expertise to countries that are interested in or in the process of launching or expanding DAB+ digital radio services. Our Asia-Pacific Technical Group gives guidance on the technical aspects of implementing DAB+ digital radio, with help and advice that is tailored specifically to the needs of the Asia Pacific region.

Our URL: www.worlddab.org



Digital Radio Mondiale (DRM) is a global, open, green, flexible, efficient, cost effective digital radio broadcasting standard covering all frequency bands:

- DRM for large coverage areas for the bands below 30 MHz (LW, MW, SW)
- with low power consumption -
- DRM for local and regional coverage with broadcast-controlled transmissions for the VHF bands above 30 MHz (bands I/II/III including FM)

DRM provides high quality sound and enhanced features: Surround Sound, Journaline text information, Slideshow, EPG, and data services like emergency warning functionality (EWF), distance learning and traffic information. India, countries in the East and South of Asia, Southern Africa, Latin America, and Europe are key DRM development markets.

The DRM international not-for-profit consortium of broadcasters, manufacturers, network operators, research institutions, etc. is making great strides in encouraging the production of mass receivers for the benefit of listeners.

www.drm.org
CONTACT: projectoffice@drm.org



Dalet empowers media-rich organizations to transform their production and distribution workflows – accelerating media operations, maximizing collaboration and creating higher value from content. As a leading media technology and service provider with over three decades of innovation, our software solutions enable greater control, enhanced visibility and increased productivity for content professionals and storytellers around the globe. Leading organizations such as Fox Networks Group, Arsenal Football Club, MediaCorp, Audi, and the BBC trust Dalet to support their daily content operations. Our team is driven by a passion for media and committed to empowering a world where compelling stories are beautifully made, effortlessly told and thoughtfully delivered. Learn more at www.dalet.com.

PHOTO GALLERY



DBS2020 was held from 2 to 5 March at Hotel Istana Kuala Lumpur with the theme “Collaborate and Innovate”.

Amid the uncertainty related to COVID-19 the event had less exhibitors, participants and speakers compared to previous years.

Close to 500 participants joined the event representing over 200 organisations from 38 countries. Twelve exhibitors joined the event with many having to cancel their participation due to travel restrictions.

In all DBS2020 was supported by 24 sponsors, exhibitors and media partners.





Congratulations to Blonde Robot on winning the DBS 2020 Best Booth Award.



The award was introduced in 2016 with the winner receiving a complimentary single booth at the following year's DBS. Participants in the symposium choose the best booth by voting based on design, presentation and value provided.

2020 ABU Engineering Awards

ABU
ENGINEERING AWARDS
2020

KOBA

The 2020 Technical Awards were held virtually on 24 November during the ABU Technical Committee.

The **ABU Broadcast Engineering Excellence Award**, which recognises contributions of an outstanding nature in broadcast engineering made by an individual in a broadcasting organisation was awarded to Mr Iwaki Masakazu of NHK-Japan. Mr Iwaki is Senior Director at Senior Director of NHK Engineering System Inc and won the award for his promotion of AI technologies for programme production and his outstanding contributions to the ABU Technical Committee and ABU activities.

The **ABU Engineering Industry Excellence Award**, which recognises the most outstanding engineering contribution made by an individual to the broadcasting industry in the region, was awarded to Ms Zhang Hong, Director General, Radio and Television Administration of Guangxi Zhuang Autonomous Region, RTPRC-China who won the award for her outstanding leadership of the broadcasting industry of Guangxi Zhuang Autonomous Region.

The **ABU Green Broadcast Engineering Award** recognises outstanding contributions in developing, implementing and/or promoting green technology in the broadcasting industry. The 2020 winner was the Radio, Film & TV Design and Research Institute, China who won the award for promoting environmental protection measures and green initiatives in the design and construction of the Guangzhou TV Tower.

The sponsor of the **2020 ABU Green Broadcast Engineering Award is KOBA**. We highly appreciate their support. Our thanks also to KBS for initiating the sponsorship.

There were no nominees for the ABU Developing Broadcasters' Excellence Award this year.

ABU Technical Review Prizes 2020

The ABU Technical Review Prizes were awarded for articles contributed to the Technical Review from October 2019 to September 2020. Three prizes were presented each from the categories of Practical Implementation, Research and Case Studies.

The winners for the **Best Article on Practical Implementation** are Mr R Arul, Mr S Gurumanickam and Mr K Balaji of Doordarshan India who co-authored the article titled Indigenous News Automation Software at DDK Chennai which appeared in the April-June 2020 issue of the ABU Technical Review.

The **Best Article on Research** was co-authored by Dr Kazuyoshi Shogen of B-SAT, Japan and Mr Thong Pham Viet of ITU-R. Their article titled Effectiveness of Frequency Sharing Criteria in the Broadcasting Satellite Link appeared in the October-November-December 2019 issue of the ABU Technical Review.

The winner of the **Best Article on Case Studies** is Mr M S Duhan of Doordarshan-India who authored the article titled Seminal motives for Digital TV: Metamorphosis of ATT into DTT, which appeared in the January-March 2020 issue of the ABU Technical Review.



From left: Mr R Arul, Mr S Gurumanickam and Mr K Balaji of Doordarshan India



Dr Kazuyoshi Shogen (left) of B-SAT, Japan and Mr Thong Pham Viet (right) of ITU-R



Mr M S Duhan of Doordarshan-India



Mr Iwaki Masakazu of NHK-Japan



Ms Zhang Hong, Director General, Radio and Television Administration of Guangxi Zhuang Autonomous Region, RTPRC-China

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