

### SPEAKERS BIOS

TUESDAY 28 JANUARY 2020



MODERATED BY **Hans Hoffmann** is EBU Senior Manager and head of unit on media fundamentals and production technologies in the EBU Technology and Innovation department. He has been for 9 years with the Institut fuer Rundfunktechnik (IRT) as research staff in new Television production technologies department until moving to the EBU in 2000. In the EBU he has been leading many activities on media integration, production technologies, video codec evaluations, he established the EBU HDTV testing lab, and work with EBU Members on IT based digital workflows and recently UHD TV. He has been author of many EBU Technical documents; IEEE papers and is a standing speaker and contributor to international conferences. Hans is a fellow of the SMPTE and a member of the SID and FKT and IEEE and was the SMPTE Engineering Vice President from 2011-13.

### KEYNOTE SESSION

09:00–09:10 **Welcome note**

**Antonio Arcidiacono** is the EBU's Director of Technology & Innovation. He has extensive experience in conceiving, developing and taking new products and services to market. He is an internationally acclaimed expert in digital television, satellite communications, IP-based multimedia services and mobile telecommunications. With strong knowledge of the European market, he has worked closely with the leading players in the fields of Digital TV and Multimedia Services, and with European institutions at a technical, standardization, regulatory and competition level. Antonio was Director of Innovation, and a Member of the Management Committee, at Eutelsat from 2008 -2018 where he was responsible for launching innovative IP based satellite services. He joined Eutelsat in 1990 and took part in key phases of its development from an international organization to privatization in 2001 and to the IPO in 2005. Before working at Eutelsat, Antonio worked for the European Space Agency and started his career working for Telespazio and Selenia Spazio. He has a Doctorate in Electronics & Telecommunications Engineering from the University of Pisa.



09:10–09:40 **Digital public service media of the future – an extrapolation**

How must public service media adapt to changes in technology and user expectations in order to be able to fulfill our mission in the future?

What are the most important challenges we face and how do we enable our organisations to succeed with the transformation required?"

**Heidrun Reisæter** Director technology in NRK. Head of the division responsible for product development, technology, distribution and production.

09:40–10:10 **Staying on top of deepfakes – an opportunity for trust in PSM**

**Tom Van de Weghe** (VRT) is an award-winning investigative journalist and documentary filmmaker. He is Research Fellow at Stanford University, where he is researching artificial intelligence and started the Deepfakes Research Team. He is developing an AI strategy for VRT News, the Belgian public broadcaster VRT. He is the former bureau chief of VRT News America in Washington, D.C. (2012-2016) and he was the bureau chief of VRT News Asia in Beijing (2007-2012).



## THE EVOLUTION OF CONTENT CREATION



10:10–10:40 **Content creation in 2030**

Jim Helman (MovieLabs)

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### 10.40–11:10 **The evolution of digital media supply chains**

Innovation in digital media supply chains is impacting the production process in profound ways; from lens metadata to the promise of editing in the cloud. As the industry moves towards an emerging vision of connected production, we can learn a lot from the evolution of digital media supply chains. For successful outcomes, we will need to think deeply about how we approach technological standards, change management and choosing the right approach for solving problems in order to truly reap the benefits of connected production.

**Naz Pethani** (Netflix) is an entrepreneurial product and technology executive leading Netflix's efforts to enable and innovate how content is produced. As a technologist at heart, Naz started his career launching and commercializing technologies (UMD, HD-DVD, and Blu-ray) for Hollywood studios and built the high-performing New Technology teams that fueled Deluxe's transformation from a film laboratory into a digital powerhouse. Over the years he has held several executive positions at Deluxe overseeing global media operations, facilities/P&Ls, and technology portfolios. As SVP of Product, Naz drove the aggregation of Deluxe's acquisitions into a cohesive ecosystem spanning from lens to living room. In his spare time, Naz is passionate about cutting-edge neuroscience-based mental health treatment techniques and serves on a few private boards to help champion advancements in the field.



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## SESSION 1: NEW SERVICES AND NEW WAYS OF PRODUCTION – PART 1



### 11:55–12:25 **Esports production and publishing platforms**

This presentation will cover the basics on how to build an esports broadcast production and what benefits or limitations there are with digital or linear platforms.

**Juha Lahti** has worked 15 years at YLE both in tv and radio. Producing shows ranging from award winning political satire to sitcoms. He founded Yle Esports department at 2014 and has since worked with many global esports events. He has also worked in Wargaming as the head of broadcast in esports.

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### 12:25–12:55 **Volumetric Capture for broadcast studios**

**Chris Johns** has been with Sky since its inception in 1989 having started his career in broadcast with the BBC. Chris formed part of the initial technical team tasked with launching Sky's multi-channel analogue satellite offering.

As chief engineer, Chris has been at the forefront of delivering broadcast functionality to the platform such as the multichannel digital playout facilities, Dolby Digital audio, server-based solutions and compression systems. Having played a key role in Sky's HD launch and design of its HD infrastructure, continues to evolve many new experiences such as UHD, Virtual Reality and enhanced audio as well as the associated technologies to deliver better images and sound to the consumer.

As chair of the DPP group on IMF for Broadcast and Online he was instrumental in the delivery of SMPTE 2121 and continues with ongoing initiatives in the area.

Sitting on and chairing many broadcast groups and societies, Chris is also a SMPTE Fellow.



## THE EVOLUTION OF CONTENT CREATION

### 12:55–13:25 Sport Studio Production utilising Game Engine workflows

The reasons BBC Sport decided to take their iconic football programme 'Match of the Day' from a traditional studio to a virtual studio using gaming engine technology and the lessons learnt.

As a Creative Director for BBC Sport **John Murphy** leads on the branding, visual graphics and graphical innovation for the department. His role crosses all areas of BBC Sport including; Football, Olympics, World Cup, Wimbledon and many more. John has placed a large importance in VR and AR being used to innovate and to help create a unique viewing experience which helps narrate the editorial focus of the programme.



## SESSION 2: NEW SERVICES AND NEW WAYS OF PRODUCTION – PART 2

### 14:55–15:25 Newsroom evolution or revolution? A socio-technical approach



A socio-technical approach Our industry has been disrupted. With the evolvement of new ecosystems and multisided platforms, the trend to consume content online is increasing. Our capability to adapt to the new environment is catalytic for broadcasters. Technology can be an enabler in our transformational journey. We are spending budgets on new technologies, but do we really reap full benefits from our technological interventions? How rapidly do we assimilate new technologies and what does technology assimilation really mean? Academia reports that 70% of information systems projects fail to deliver the expected outcomes due to non-technical organizational factors. Technology capability is a socially complex organizational capability. Aligning technologies with people and organizational processes is what will enable broadcasters to thrive. Cyprus Broadcasting Corporation has gone through a huge digital transformational process in the last years. The installation and operation of our production and archive platform, multichannel television playout system, multimedia newsroom system, several fully integrated craft editing systems and graphics systems, all operating under the orchestration of CyBC's Media Asset Management System enabled the house to move from tape to file based, automated workflows. The digitization, digital restoration, annotation and repurpose/reuse of our legacy audiovisual archives, an EU funded project, helped to reach new audience, build a sense of community within our viewers and added value to the organization as

Cyprus's PSM. The biggest challenge through this technological transformational journey, was the replacement of our 22 years old newsroom system to a new multimedia, story centric and file-based system. All systems' interoperability and flowless exchange of content offers CyBC's workforce the ability to view the entire content from their desktops. The system offers strong editing tools and autonomy to the production teams based on rights given to them through their associated user groups. Transforming the broadcast house to a file-based environment was challenging when it came to manage its human resources used in operating old analogue technologies and manual tape-based workflows. Keeping our focus on the fact that technological change, particularly in media and service organizations, is a socially complex change, special attention was given to all stakeholders. Involving the users at every stage of the change, actively seeking and considering their input during workflow analysis, as well as training them and showing the benefits to be reaped from the new technology made everyone (almost) enthusiastic. Messages sent from top management and project leaders, commitment, open communications as well as the reliability of the new systems played significant role. Through this change, CyBC managed to build more openness between departments, got them to work more closely together and understand each other's needs during production, innovated and made more efficient its production processes. The change impacted the organization as well at a cultural level as colleagues are now more open to change.

**Dr Yioula Kyriacou** – I have been working in the Broadcast industry for 24 years. Soon after obtaining my MSc in Radio Communication and Radio Broadcast engineering, I worked for five years at a private broadcast house and for the last twenty years I am working at Cyprus Broadcasting Corporation, where in 2007 I have been assigned Head of production and archive facilities and additionally in 2010 Head of IT. I have proposed and managed projects such as HD 12 camera OB Van, HD SNG Van, HD TV Multichannel Playout System, Media Asset Management System, Archives' Digital Platform, the restoration and digitization of part of CyBC's legacy archives and CyBC's Integrated Multimedia Newsroom System. Sensing the difficulties for technological change management and realizing how important it is to strategically plan the technological change, I joined the Cyprus International Institute of Management from where I graduated in 2006 with the master's degree in business administration. Joining in 2012 the Cyprus University of Technology for my PhD studies, I researched and continue to have an ongoing interest on the non-technical organizational factors affecting Rapid Technology Assimilation and developing models linking technology supportive practices with talent management and rapid technology assimilation to achieve innovation and organizational competitiveness. I have followed numerous professional training, at the BBC academy, the European Broadcasting Union, the French Institut national de l'audiovisuel as well as the United States Telecommunications Institute.

## THE EVOLUTION OF CONTENT CREATION



### 15:25–15:55 **Middleware, the key for Programme production**

Bruce Devlin is the SMPTE Standards Vice President, founder of Mr MXF and has enjoyed C-level positions at media companies over the years. He literally wrote the book on MXF and is a recognised world expert in media files and formats. Check out his free [Bruce's Shorts] video series to improve your skills in the business of file based technology.

### 15:55–16:25 **The Future for Mobile Journalism**

What kind of content will your audience want, how will you create it and how will they consume it? This session will cover the technology trends that will shape how mobile journalism and mobile content develops over the next few years. As the technology and platforms evolve, the way we tell stories and create content must change with it.

**Mark Egan** (Purple Bridge Media) is an experienced mobile-video consultant and trainer. He spent a number of years at the BBC, where he was one of the Corporation's first self-shooting video journalists. His documentary work there earned him a BAFTA nomination. In recent years Mark has helped pioneer mobile journalism around the world. As a faculty member of the EBU Academy he has delivered training for major broadcasters and organisations. Mark also advises major brands on creating multi-media content to better engage audiences.



## SESSION 3: TUTORIALS (16:55–18:25)

### Tutorial 1 (Montreux) **HDR Live Production – lessons from the field**



**Andrew Cotton** is a Principal Technologist within BBC R&D's Broadcast & Connected Systems Section. He has a background in video compression and image processing. Andrew and his team work across the entire television acquisition, production, delivery and distribution chains, ensuring the technical integrity of BBC systems. Most recently their work has focused on high dynamic range TV, as Andrew is one of the developers of the Hybrid Log-Gamma HDR system.

Andrew joined BBC Research in 1987 with a degree in Engineering Science. After seven years he left the BBC to work in industry for a leading broadcast equipment manufacturer, but returned to the BBC in 2002.

### Tutorial 2 (Geneva) **Best practices for Live IP in house testing**

Andrew Bonney (BBC), Willem Vermost (VRT), Pedro Ferreira (Bisect), Ievgen Kostiukevych (EBU)

## WEDNESDAY 29 JANUARY 2020

### MODERATED BY

**(Bob) Robbert Nicolai van de Velde**, PhD. Central to Bob's interests is the interaction of Big Data (especially tracking), AI and society. As a co-chair of the AI and Data Initiative, I work tirelessly to expand the opportunities to apply AI to improve the quality of media systems. In my role as Lead Big Data Engineer at NPO, me and my team commit to opening the rich catalogues of Dutch Public Broadcasting to the general public.



## KEYNOTE

## THE EVOLUTION OF CONTENT CREATION

### 09:00–09:30 Cloud and AI-enabled workflows



**Grant Franklin Totten** (Al Jazeera) is the Head of Media & Emerging Platforms for Al Jazeera Media Network. He is passionate about empowering newsrooms and journalists to tell more compelling stories to its audiences more efficiently through applying Data Science, Artificial Intelligence & Machine Learning and other emerging technologies in useful ways to radically transform media workflows and provide intelligence across the media lifecycle from contribution to distribution from content creation, curation, Media Asset Management, Production, Distribution and Audience Engagement.

With over 72 bureaus worldwide, Al Jazeera Media Network provides breaking news, analysis, programs, documentaries and research in over 100 countries in English, Arabic, French, Spanish and Bosnian languages.

Grant has worked in the Data Science space for over 23 years and has founded and supported multiple startups throughout his career.

## SESSION 4: EXPLOITING AI AND ARCHIVES

### 09:30–10:00 Using AI to make archives searchable

We'll share the use cases we've been able to solve with the help of machine learning tools and innovative approaches. We'll also explain why we think we need more collaboration between Public Service Media on that field and make a proposal on how we could achieve it.

**Léonard Bouchet** (RTS), 41, is an expert in digital transformation and development and co-chair of the EBU Artificial Intelligence and Data Initiative. Since January 2016, he has been heading the Swiss-french Public Media Data and Archives Department, where teams are exploring the amazing possibilities of new modes of collaboration (agility and holacracy) and innovative technologies (artificial intelligence). From 2013 to 2016, he was head of RTS' multimedia production department. Developer and project manager in the public service since 2009, he also has 10 years of previous experience in the private sector.



### 10:00–10:30 Using your archive metadata for AI applications

This speech will present challenges and opportunities related to the usage of archive assets and metadata for AI applications. It will use RAI's archive as a starting point to illustrate issues and propose possible solutions. Use cases developed by RAI R&D will be also presented and discussed.

**Alberto Messina** started as a research engineer with RAI in 1996, when he completed his MS Thesis about objective quality evaluation of MPEG2 video. After starting his career as a designer of RAI's Multimedia Catalogue, he has been involved in several internal and international research projects in digital archiving, automated documentation, and automated production. R&D Area Coordinator since 2005, he leads research on Automated Information Extraction & Management/Information and Knowledge Engineering, where he is author of more than 80 publications. He has extensive collaborations with national and international research institutions, in research projects and students tutorship. He has a PhD in Business and Management, with a specialisation in the area of Computer Science. He has been active member of several EBU Technical projects, leading EBU SP/MIM until 2018. He worked in many European funded projects including IBC Award - winning VISION Cloud.

He regularly serves in the Programme Committee of many international conferences and journals. ACM Professional member since 2005 and Contract Professor of Multimedia Archival Techniques at Politecnico di Torino from 2012 to 2015, he actively participates in International Standardisation bodies, mainly in EBU and MPEG, where he contributed to MPEG-A, MPEG-7 and MPEG 21 extensions.

### 10:30–11:00 How to implement AI-services into production tools and - and increase efficiency for both journalists and archives

At the beginning was pain. Journalists used to transcribe by hand their interviews, hours and hours of raw material, every day, in radio, TV and online. This time has passed - at least for content in high standard German (or English, French, Italian). The solution at SRF: first - we developed a web editor for speech-to-text (s2t), based on a framework done by the BBC. This on premises solution offers fast processing and a customized dictionary, combined with easy editing and a variety of export formats. Second - we connected the s2t engine to our radio editing tool, enabling journalists not only to search within audios but also to clearly improve the editing workflow. Third - we are going to implement the s2t-service in our video editing system as well. And there is more to come, like an automated workflow for the transcription and archiving of whole radio programmes...

**Christian Vogg** (SRF) started his professional career as a print journalist, then worked for radio, TV and online for 20 years at Westdeutscher Rundfunk (WDR) in Cologne. As senior advisor to the CEO at WDR he was involved in the digital strategy. Later he



and his team developed the WDR Mediathek (AV- Online-Portal). After being in charge of metadata management at WDR he joined EBU and served as Head of Radio and Music, managing the world's biggest music exchange as well as being active in radio and cross media strategies including DAB+. In his current position as Head of Archives and Metadata Manager at Swiss Radio and TV (SRF) Christian is next to the archiving and research business responsible for the improvement of metadata driven workflows throughout the company. His team was also given the task to introduce artificial intelligence supported workflows at SRF.

### SESSION 5: KEY ENABLING INFRASTRUCTURE

#### 11:30–12:00 **NMOS interoperability and the 'JT-NM Tested' programme for IP equipment**

The JT-NM Tested program continues offering the documented insights into how vendors' equipment aligns with the SMPTE ST-2110, ST 2022-7 and SMPTE ST-2059 standards. It has already proven that the SMPTE ST 2110 is a go-to standard for the media over IP transport. However, as described in the "EBU Pyramid", having just a media transport without an open control plane is not enough. Therefore, it had been decided that the next iteration of the program has to address that and greatly expand its scope.

Therefore the second iteration of the program included 3 types of tests:

- Data plane: Basic SMPTE ST 2110 performance and behavior (this time including UHD formats)
- Control plane: AMWA NMOS and JT-NM TR-1001-1 performance and behavior
- Cyber Security Vulnerability Assessment

In this presentation, the authors of the JT-NM Tested program and the editors of the test plans explain in great detail the new and improved test plans, testing infrastructure, testing procedures, methodologies, results, and overall findings.

Attendees will be able to apply the knowledge, offered resources and methodologies for various testing scenarios including self-assessment of open-source or commercial media over IP software and hardware by vendors and R&D labs, equipment performance assessment and validation by users and solution architects, tendering and qualification of the equipment by in-house broadcasters' labs, infrastructure architecture and troubleshooting by system integrators.



**Andrew Bonney** (BBC) forms part of a BBC team with a focus on applying IP and IT technology to media production challenges. He has spent much of the past few years working with the wider industry to develop the AMWA NMOS APIs for broadcast control.

**Willem Vermost** (VRT) recently move to VRT as a Design & Engineering Manager. Prior to this role, he was the topic lead on the transition to IP based studios at EBU. With 20 years of experience in broadcast, he is an expert and project manager of international strategic, expert groups and events. Willem has a master degree in electronic engineering and a master in applied computer science. He worked on various projects, including the multiple award-winning VRT Live IP proof of concepts, the JT-NM Tested Program and started the open source project EBU Live IP Software Toolkit project (LIST) which has grown to an international project.



**Ievgen Kostiukevych** is a member of the EBU Technology & Innovation team. He has gained more than a decade of experience in the broadcasting and sound production industry, including experience in change management, solutions architecture and AoIP integration. He is working on topics of IP networks, media over IP, PTP, networks programmability and automation, etc. Ievgen is a member of SMPTE and AES."

## THE EVOLUTION OF CONTENT CREATION

### 12:00–12:30 NDI Video – making IP video accessible for Live, Post-Production, Mobile Devices and Delivery

NDI is a technology with a tremendous diffusion in our industry. To many of our customer who place the content production and delivery at the first place, NDI represent the perfect solution for moving to IP. NDI has been developed to be easy to implement, cost effective, plug and play, with the promise to offer full interoperability between equipments. As Vizrt Group we are investing a big amount of our resource making NDI fitting our customer needs to make their move to IP a great succes.

**Roberto Musso (Vizrt)** I've started my career in 1979. At that time I was working with my father running the Italian technical support for Wang Laboratories ([http://en.wikipedia.org/wiki/Wang\\_Laboratories](http://en.wikipedia.org/wiki/Wang_Laboratories)). It was a great experience where I had the opportunity to be part of the personal computer revolution, started in the 80' and not finished yet! At the beginning of the 90' I've started to be interested about the computer graphics and I've invested a lot of energy increasing my knowledge about 2D and 3D animation. In 1992 I've been recruited by SIS Image as pre and post sales support manager, SIS Image was the main Italian distributor and pioneer for computer graphics and broadcast equipment (Audodesk, Barco, Dyaquest, Digital Processing System, Topas, Inscrber CG, Truevision and many others). In 1996 I've joined Sigeco Idee & Computer as creative project manager. At that time Sigeco was the leader of the real time Character Generator software development in Italy. With Sigeco, in 1998 I was the project leader for the first fibre channel storage area network application in the live video production market. With this technology we had developed the first computer based play-out system for an Italian national broadcaster. Mediaset. Between 1999 and today I've worked as consultant for the development of many TV channel projects (Sailing Channel, CNBC Italy, Teletutto, Mediaset, gruppo Editoriale L'Espresso, DJ TV, RAI and many others) In 1999 I've joined 3D Storm as Company Representative, managing the Italian market. At that time in Italy there was 1 distributor mainly focused on the 3D animation market. Early in 2000 NewTek have introduced the integrated production system VideoToaster NT. This was the beginning of the Broadcast market development for NewTek In Europe. My first goal was to build a dealer network and to create a product reputation in the Broadcast industry. During 16 years I've directly supported the start up of several key account (Rai, Mediaset, La7, CNBC, RSI and many others) and territories (Russia, Turkey, Bulgaria, Albania, Croatia, Bosnia, Slovenia, Denmark, Switzerland, Hungary). I'm now managing a strong dealer network in Italy, Greece, Cyprus and Malta. NewTek products are now considered one of the industry standard, NewTek TriCaster is the most successful integrated production system in the broadcast market. I'm glad to be part of this history. After 3D Storm I've moved to the production side, working as show director at FOx Sports and managing as CEO and CTO my own production Company, MediaNews S.r.l. In September 2019 I've joined Vizrt as product manager for IP & NDI. Finally back supporting and developing great projects!



### 12:30–13:00 The future of infrastructure is agile



**Phil Tudor** is a Principal Engineer at BBC R&D, leading a team of researchers looking at file-based workflows for production & archives, emerging approaches for IP production, capturing and using data in the production process, and the development of open standards. Phil's technical background includes video compression research and standardisation, digital television, software engineering, distributed computing and the development and standardisation of professional media file formats. He is a SMPTE fellow, chair of the EBU Strategic Programme for Infrastructure & Security, a director of the Advanced Media Workflow Association and a Chartered Engineer.

## SESSION 6: PRODUCTION WORKFLOWS

### 14:30–15:00 5G in future production workflows

An update on the latest progress in the exploration of the use of 5G for production. we will look at work that the BBC and other members have been doing to explore the potential of a fully connected world.

We will also look ahead to future possibilities and some of the challenges in defining future workflows as well as some things that 5G will bring from other verticals that may benefit how we work in the future

**Ian Wagdin** (BBC) "Ian is the chair of the EBU working group on 5G for content production.

He has been coordinating the use cases for how production may use 5G in the future and feeding into the telecoms standards to ensure production needs are met.

His background is in production and new technologies and their impact on programme makers



## THE EVOLUTION OF CONTENT CREATION



### 15:00–15:30 Producing „maiLab“ for YouTube – opportunities and risks

The YouTube-Channel «maiLab» started in October 2016. In its first year, the channel struggled with low growth rates. Today, there is an engaged community of 600'000 loyal followers. I will talk about how a team of two women (now three) turned «maiLab» into a success story and what we learned about YouTube during our journey.

**Melanie Gath** (SWR) is an Online-Journalist and Motion-Designer. She has a degree in Audiovisual Media from the Zurich University of Arts. She has worked for different radio- and tv-stations and as a news-journalist. Since 2016 she is working for SWR/funk where Mai Thi Nguyen-Kim und she founded «mailab

### 15:30–16:00 Microservices and metadata enablers for workflows

**Loic Barbou** is the chief architect for Bloomberg Media. He is a renown pioneer in the media world and has led to the creation of new industry standards and concepts. His activities include designing new media technologies to optimize media production and distribution, or to create media platforms expanding market type and reach. Prior as the founder and leader of the Triskel organization, he has assembled a consulting group composed of the best experts in the field of media technology services. A technologist at heart, he has mentored and made best of breed system implementation accessible to teams across many organizations. His background spans several area including AI, system architecture, software design and implementation.



## SPECIAL SESSION



### 16:00–16:30 Media technologies for Tokyo 2020 and beyond at NHK Japan

**Kohji Mitani** will present the current state of 4K and 8K content production for broadcast at NHK in the run-up to the Tokyo 2020 Games. Then, he will go on to talk about the role that the Olympics have had in the development of broadcast technology, and new services that NHK will be offering for the Games this year. Furthermore, he will refer to NHK's study on future media and content production beyond 2020.

**Kohji Mitani** (NHK) Kohji Mitani is Director of Science and Technology Research Laboratories (STRL) in NHK. He directs R&D for new media technologies and services in the three areas, "Reality Imaging", "Connected Media" and "Smart Production". He has contributed to the research and development of UHDTV as a future television system since 1995 at STRL. He was also involved in the development of practical 8K production and broadcasting systems at NHK

Broadcasting Center. He received a Ph.D. degree in 1999, from Kyoto University and the fellow grade of membership from SMPTE in 2010.

## THURSDAY 30 JANUARY 2020

### MODERATED BY

**Thomas Saner** (SRG-SSR) started his professional career with Studer Audio in Switzerland. In 1988, he joined SRG SSR, the public service broadcaster in Switzerland. He was responsible for many projects in the field of digital audio. In 1997, Thomas Saner took over the management of the service centre responsible for the distribution of all Radio- and TV-programmes of SRG SSR. In 2007 Mr. Saner was appointed Head of strategic distribution planning in the headquarters department of Technology and Information. Here he was responsible for the elaboration of the distribution strategy for Radio, TV and Online. Since 2014 Mr. Saner is senior advisor in SRG SSR. He coordinates projects and develops strategies in production and distribution. Mr. Saner is vice-chair of the EBU Technical Committee and Liaison to the Strategic program Production





## THE EVOLUTION OF CONTENT CREATION

### 09:00–09:30 The EBU full open ecosystem for Next Generation Audio



Summary of the last EBU deliverables brought by members who developed software tools and reference documentation to ease the production and broadcasting of Next Generation Audio.

**Dagmar Driesnack** (IRT) graduated in Media Technology at the University of Applied Sciences in Mittweida. In her diploma thesis at IRT in 2006, she joined IRT as a research engineer and is now working in the department “AV Technologies” looking to topics like picture quality aspects in production, contribution and distribution for HDTV and beyond HD. She is also chairing these projects at IRT. She was leading the EU funded project DIOMEDES at IRT. She chaired the former EBU D/HDrec-group and now co-chair of the EBU’s Video Systems group. She is also a member of the DVB project, SMPTE and the FKT.

**Matthieu Parmentier** (FranceTV) started his audio career recording classical music CDs. He joined France Televisions - the French public broadcaster - in 1999 as a sound engineer for live programs and started the management of 3D audio, UHD video and metadata projects eight years later. Matthieu is a board member of the EBU Production Strategic Programme which embraces audio, video and metadata topics, and co-chairs the Audio Engineering Society Technical Committee for Broadcast and Online Delivery. He chairs or participates in several collaborative R&D projects. He holds two license degrees in sound recording and video post-production and a master degree in audiovisual research from the Toulouse II University.



### 09:30–10:00 How can dynamic conversion help to improve HDR live production



Contrast compression, especially in live production, is the decisive element for the widespread introduction of HDR and is initially independent of the actual HDR standard. A synergetic workflow, which real HDR shading, is currently not used. The variance of the exposure would be too large for the contrast compression systems available today. This means a real HDR production needs less shading, since the luminance range is so wide that clipping occurs very rarely. Therefrom changes in brightness levels can be passed on to the viewers, which leads to an improved immersion. Due to the narrow corridor at SDR, such fluctuations must be compensated by using the aperture. If the SDR signal should now be derived automatically from a wide HDR signal, this won't work by always cutting out a defined area of the signal. That is why HDR productions are controlled according to the SDR signal. However, both the HDR image and the SDR image fall short of their possibilities. The HDR image, since it is limited in its maximum luminance and variance, and the SDR image, since it can hardly benefit from the expanded contrast range. Even the BT.2408 (“Guidance for operational practices in HDR television production”) must admit:

If the SDR production must not be compromised, both HDR and SDR cameras should be shaded using an SDR monitor fed via a down-converter. Whilst the HDR signals may not always exploit the full potential of the HDR production formats, the HDR pictures can still show significant improvement over SDR.

A real HDR shading would require a system which practically adjusts the aperture for SDR or combines significantly more contrast within an SDR image, so that the aperture loses relevance. Compared to common static systems it would work dynamically. In this presentation it should be shown how dynamic conversion could help to improve HDR production, addressing the following part in the BT.2408:

As the exposure latitude of HDR images is far greater than SDR, a dynamic HDR to SDR converter may be required to deliver a satisfactory SDR output. A dynamic converter is designed to optimise the HDR to SDR tone mapping curve for any scene, thereby accommodating a wider range of exposures than might be possible with a fixed (or static) tone mapping curve.

**Lucien Lenzen** (Hochschule Rheinmain) got his Master in Media- and Communications Technology with a focus on television engineering in November 2014. Since then he is working as a research assistant at the RheinMain University of Applied Sciences (Hochschule RheinMain). His research topics are UHDTV and especially HDR. The studies address question concerning automatic down conversion, viewer preference and bit rate. Moreover, he is a Ph.D. student of Prof. Brandenburg at the Technical University Ilmenau. In 2016 he received the “Best Young Professional Award” of IET (Institution of Engineering and Technology) and IBC (International Broadcasting Convention). Since 2018 he is board member of the German FK TG (Fernseh- und Kinotechnische Gesellschaft).

### 10:00–10:30 Next Generation Audio (NGA)

Nuno Duarte (OBS)

### 10:30–11:00 Audio workflow automation

With the recent unparalleled increase in demand for content, the need for production simplification and differentiation has never been greater.

insoundz creates a volumetric audio model of any given space, powering audio workflow automation & next-generation experiences. insoundz solution includes a non-intrusive digital microphone array and license to its ‘Audio service Platform’.

Installation for TV Studios, Film sets & Newsrooms is a one-time straight-forward and simple process. Once installed, insoundz solution allows for full automation of the audio production process eliminating the need for existing microphone equipment and the complexity of managing audio set-up for each production.

## THE EVOLUTION OF CONTENT CREATION

insoundz revolutionary 'Audio Green-Screen' drives workflow efficiency in real-time, post-production insight utilization and opens-up the path to inspire creativity and enable new content and formats.



**Michal Grundland** serves as VP Business Development @ insoundz since January 2019. Michal holds a deep background within TV, Broadcasting & Media operations with strong link to Sports and live events.

In her TV career, Michal leads a few big productions as a head producer and as a Sports TV Presenter.

Prior to her role in insoundz, Michal was The Spokeswomen and head of Media operations at the Israel Football Association and as an external Media Officer @ UEFA (until today). Michal is an Adv., she holds a LLb in civil law and a master in international sports law.

**Ofir Bar Levav** serves as Chief Business Officer at insoundz since May 2018. Prior to insoundz, Mr. Bar Levav held various management positions In Johnson Controls, most recently as General Manager, Global Open Innovation. Prior to Johnson Controls Mr. Bar Levav held numerous strategy, Business development & Finance management positions for Procter & Gamble in Tel Aviv, Israel, Geneva, Switzerland and Brussels, Belgium. Mr. Bar Levav holds a Master of Philosophy degree from Tel Aviv University, as well as Bachelors' degrees in both accounting and philosophy, also from Tel Aviv University.



### SESSION 9: THE PERSONALIZED AND ENRICHED MEDIA EXPERIENCE

#### 11:30–12:00 **Quantity and quality, putting the person back in personalization at Swedish Radio**



I aim to talk about how we approach the subject of personalization at Swedish Radio, why we believe that it is an important factor in digital products these days. I'll share how we combine quantitative analytics with qualitative user research to discover how we can continually adjust our personalization offerings. Probably more ramblings on methodology, less demos of technology :)

**Jörgen Bang (SR)** Product Owner for Personalization at Swedish Radio. 20+ years of experience in the internet industry. Currently focusing on recommender systems and personalization. Agilist! Data-driven, preferably. Clever UX makes me happy.

#### 12:00–12:30 **Personalization in Yle Areena**

Personalization is a key element of Yle Areena service. This presentation covers the personalization features of service, how they were created and what results personalization has created for the service.

**Kari Haakana** is head of services in Finnish Broadcasting Company (Yle). He's responsible for developing Yle's online video and audio service Yle Areena. Before joining Yle, Kari worked as a technology journalist for more than ten years



#### 12:30–13:00 **Accessibility or Personalised Media?**



A quarter of the EU population aged 16 or over reported long standing disabilities in 2017. The population is steadily ageing, increasing the prevalence of age-related disabilities. The EU has significantly improved the legal framework for accessibility, revising the Audio-Visual Media Services Directive (AVMSD) in 2018. This requires the Member States to encourage media service providers to develop accessibility action plans for making their services more accessible to persons with disabilities.

As Public Service Media organisations we are often regulated to provide such services, how can we use the drive for bigger, better and more personalised services to provide a much-improved Quality of Experience for all?

**Andy Quested** started working as a BBC Technical Assistant in 1978 becoming a video-tape editor in 1985 where he worked on many comedy, children's and documentary series

In 1998 Andy moved to a new BBC technology department working on the BBC's first HD programmes including Planet Earth I and the first UHD programme, Planet Earth II.

He is technical lead for the UK's Digital Production Partnerships AS-11 format and leads the EBU Production Strategic Group looking at all areas of content. He is also an active member of SMPTE, becoming a Fellow in 2014 for work relating to standards

Andy is also chair of ITU-R Working Party 6C where he initiated new areas of study on Advanced Immersive Audio Visual Systems and Artificial Intelligence in content production and international programme exchange.

# PRODUCTION TECHNOLOGY

## SEMINAR

AN EBU EVENT

## THE EVOLUTION OF CONTENT CREATION

Geneva, 28-30 January 2020