# PROGRAMME

## TUESDAY 15 JUNE 2021 (10:00 – 17:45 CEST)

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| 10:00 – 10:15 | **Welcome & Introduction** | Antonio Arcidiaccono (EBU), Hans Hoffmann (EBU) |

## SESSION 1: EMBRACING THE CLOUD
### MODERATED BY CONRAD GOUWS (RTE)

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| 10:15 – 10:45 | **Introduction** | Conrad Gouws (RTE) |
| 10:45 – 11:15 | **Audio in the Cloud with AES67** <br> This presentation highlights the challenge of moving AES67 streams out of the LAN and into the WAN and Cloud. We will see how problems like delay, sync and reliability can be addressed and the challenge of processing AES67 streams in the cloud. Real world experiences will be discussed as illustrations | Nicolas Sturmel (Merging Technologies) |
| 11:15 – 11:45 | **Moving infrastructure to the cloud? How to measure the impact** <br> As we are moving more and more our infrastructures in the cloud, it's important to understand it's environmental impact. We propose a protocol to measure cloud infrastructures | Cedric Lejeune (Workflowers) Benjamin Davy (teads.tv) |
| 11:45 – 12:15 | **High Quality Live Production in the Cloud, with CDI and JPEG XS** <br> While ST 2110-20 brought uncompressed over IP to the on-premises broadcast plant, it is not well suited for transport to or inside the cloud. The open-source Cloud Digital Interface (CDI) SDK abstracts software interfaces for uncompressed video, audio, and metadata flows inside the cloud. AWS implements CDI using the Scalable Reliable Datagram (SRD) cloud-fit mechanism for media transport. To get media to and from the cloud, JPEG XS is an attractive high-quality, low-latency codec. This talk will look at CDI, SRD, and JPEG XS, and will describe how these technologies were used by a new media center built by the US broadcaster FOX. | Thomas Edwards (Amazon Web Services - AWS) |
| *12:15 – 13:30* | *Lunch Break* | |

## KEYNOTE
### INTRODUCTION BY IEVGEN KOSTIUKEVYCH (EBU)

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| 13:30 – 14:00 | **Experience and lessons learned from adopting cloud-based live production workflows and technologies** | Paul Cheesbrough (Fox Corporation) |

## SESSION 2: GOING HYBRID
### MODERATED BY WILLEM VERMOST (VRT)

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| 14:00 – 14:30 | **Introduction and tour** <br> We'll take the audience on a virtual tour through VRT. What have we been doing lately? Working on IP based facilities, introduce prosumer tech and took a deep into game engines for virtual productions. | Willem Vermost (VRT) |
| 14:30 – 15:00 | **Video editing in VRT on-prem cloud** <br> We present the results of the proof of concept "Video editing with Vmware" (with Nvidia vGPU) | Jonas Rymenants (VRT) Joris Grauwels (VRT) |
| 15:00 – 15:30 | **RIPE Atlas - Probing the state of the Internet** <br> This presentation will be about RIPE Atlas, a platform to measure the Internet infrastructure | Emile Aben (RIPE) |
| *15:30 – 16:00* | *Break* | |

## SESSION 3: DELIVERING ON-PREM
### MODERATED BY FELIX POULIN (CBC/RADIO CANADA)

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| 16:00 – 16:45 | **Introduction and tour** | Felix Poulin (CBC/Radio Canada) |
| | CBC/Radio-Canada are currently moving to their new broadcasting house in Montreal, they will give us a visit of the new facility that is built with all-IP technology. | Francois Legrand (CBC/Radio Canada) |
| 16:45 – 17:15 | **Networked microphones and IEM** | Anthony Kuzub (CBC/Radio Canada) |
| | A sound signal from a persons mouth to a persons ear can be broken down into tiny, networked, controllable components. This presentation explores the hidden complexities in networked audio and the challenges of wireless microphones in a large production facility. | |
| 17:15 – 17:45 | **Metechno: One Year after OnAir, what has changed?** | Sandro Furter (SRG) |
| | Over the years, the EBU community has been able to follow SRG's Metechno project: A sophisticated full IP facility for SRF in Zurich. Since exactly one year the new building has the first services OnAir. One year later, Sandro's presentation provides some insights into the project, an overview of the sub-projects that are still open and some lessons learned. What is new for the journalists, for the editors or for the technicians when working in a full IP facility? How are outages or interruptions handled? And what's next? | |
| *17:45* | *End of Day 1* | |

# WEDNESDAY 16 JUNE 2021 (10:00 – 16:30 CEST)

## KEYNOTE
### INTRODUCTION BY IEVGEN KOSTIUKEVYCH (EBU)

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| 10:00 – 10:30 | **Keynote: The race to re-tool the media factory** | Mark Harrison (DPP) |

## SESSION 4: LOOKING INTO THE FUTURE
### MODERATED BY LUCILLE VERBAERE (EBU)

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| 10:30 – 11:00 | **Synthetic Reality: VR/AR meets Broadcasting** <br><br> VR and AR are emerging as both potent technologies and active marketplaces. Both offer opportunity to leverage the best of traditional broadcasting with these incredible emerging forms. A discussion based on some early experiments with Mixed Reality productions. | Michael Nunan (Bell Media) |
| 11:00 – 11:30 | **Virtual production – the new picture** | Ed Plowman (Disguise) <br> Raed Al Tikriti (Disguise) |
| 11:30 – 12:00 | **Quantum Technologies and their applications for telecommunications** <br><br> I will introduce quantum technologies, highlighting why they are so unique. I will briefly describe quantum imaging, sensing and timing before addressing quantum computing and quantum communications in more depth. I will cover the work BT has been doing here over the past 8 years including our various trials of Quantum Key Distribution, which is an ultra secure method of encrypting optical transmission links. Finally I will look to the future and introduce the so-called quantum internet. | Prof. Andrew Lord (BT R&D) |
| 12:00 – 13:00 | *Lunch Break* | |

## TECHNOLOGY BRIEFINGS
### MODERATED BY IEVGEN KOSTIUKEVYCH (EBU)

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| 13:00 – 13:45 | **Understanding how clouds are built** <br><br> This presentation starts with a service-orientated approach to public cloud operations. It maps those offerings against the major public cloud providers products. Then it discusses orchestration against multi-tenanted and multi-cloud environments covering the current potential solutions in the marketplace. By using a "virtual server" as an example, we show how on deployment all the required resources are deconstructed and abstracted. Finally, we summarize with an example use case how users are already capitalising on these capabilities. | Thomas Kernen (NVIDIA) <br> Richard Hastie (NVIDIA) |
| 13:45 – 14:00 | *Break* | |
| 14:00 – 14:45 | **Getting started with cloud deployment for media applications** <br><br> An introduction to common deployment and automation tools such as Docker, Terraform and Ansible. We'll demonstrate how they can be used to deploy practical systems to your own (or public!) cloud, along with having a look at how a mature development team manage and automate deployments of cloud-fit production systems. | Georgina Shippey (BBC) <br> Sam Mesterton-Gibbons (BBC) |
| 14:45 – 15:00 | *Break* | |
| 15:00 – 15:45 | **Perfecting ST2110 with testing capabilities** <br><br> Now SMPTE ST 2110 is being operated in many facilities and OB vans, it is time to complement it with some recommendations concerning testing and measurement. This presentation will cover the latest efforts of the industry in achieving this goal. | Willem Vermost (VRT) <br> Pavlo Kondratenko (EBU) |
| 15:45 – 16:15 | **Pre-wrap up: One more thing… Keep Safe!** <br><br> A last word of advice on keeping safe and/or secure and avoiding unnecessary risks in these challenging times. | Gerben Dierick (VRT) |
| 16:15 – 16:30 | **Wrap-up** | Ievgen Kostiukevych (EBU) |