VSF Fall Meeting Series Webinar– Wednesday, Sept. 22, 11:00 AM to 3:00 PM EDT USA

Welcome Richard Friedel – FOX Television Stations, VSF President

Presentations

Experiences from weekly sports broadcasts over 5G - what's possible and what isn't yet? (30m) **11AM**
Kieran Kunhya - Open Broadcast Systems & Fiachna Mac Murchu from Nemeton TV (Ireland).

PBS Kids goes Live in Australia Directly from the USA (10m) **11:30AM**
Rick Phelps-Brooklynn Media & Kieran Kunhya-OBS

RIST My PTZ Security Cam (15m) **11:40AM**
Sergio Ammirata, Ph.D. Sip Radius LLC

(15 MIN BREAK)

Panel Discussion "Ground Meets Cloud" (30m) **12:15PM**
Participants: Chair, John Mailhot-Imagine Comm., Andy Rayner-Nevion, John Dale-Media Links, Kieran Kunhya - OBS, and a proxy customer.

Timing in IP Production – on the Ground and in the Cloud (25m) **12:45PM**
Andy Rayner-Nevion

Introducing the RIST Advanced Profile: Professional Class Features for Media Enterprises. (25m) **1:10PM**
 Ciro Noronha-Cobalt Digital & Wes Simpson- LearnIPvideo.com

(15 MIN BREAK)

 Delivery of STLTP seamlessly over multiple Links. (25m) **1:50PM**
Adi Rozenberg-Video-Flow

Activity Group Updates Start Time 2:15PM

SMPTE ST 2110 over WAN (WAN)   Andy Rayner – Nevion

Ground-Cloud-Cloud-Ground (GCCG)   John Mailhot – Imagine Communications

RIST Activity Group Update   Rick Ackermans – CBS

JPEG XS Coding   John Dale – Media Links

Internet Protocol Media Experience (IPMX)   Jack Douglass – PacketStorm

Synopsis

Experiences from weekly sports broadcasts over 5G - what's possible and what isn't yet.

In many countries, 5G has enough coverage that we are using it for live mid/high-end sports broadcasts on a weekly basis using fixed satellite/fiber bitrates and without using vendor-specific cellular bonding solutions.

This presentation will go into detail around the initial findings of network performance, key metrics such as latency and jitter as well as a comparison between 4G and on-site FTTC. It will cover what the networks can do today, but also what we hope the networks will be able to offer in the future, in particular being able to offer reliable latencies comparable to fiber connections. It will also explore future use-cases like replacement of wireless in-car RF cameras with 5G.

PBS Kids goes Live in Australia Directly from the USA.

On July 1, 2021, Foxtel Australia started delivering PBS Kids to their live linear broadcast viewing audience via satellite and cable. Brklyn Media and Open Broadcast Systems teamed up to deliver 24x7 program streams using RIST technology from playout centers located in New York and Pennsylvania directly to the air chain in Australia using only the public Internet for connectivity.

In this presentation Rick Phelps, Managing Partner of Brklyn and Kieran Kunhya, Founder and CEO of OBS describe how they built the system to meet a tight deadline, how they handled the unique caption formats that are required, and how the system can evolve and grow alongside Foxtel's plan for an all-IP future.

RIST My PTZ Security Cam.

Synopsis: We present a new use of a new feature: TUN support by which we transport both a security camera feed and the PTZ (point-tilt-zoom) software commands for it via RIST. We will use libRIST to set up a tunnel to our PTZ camera, view the feed over RIST, and then run the camera control software to zoom in, out, etc. While the video may not be the most exciting ever, that RIST can now be applied to everyday, boring but essential tasks not only shows RIST's maturity, but also that it's time for end user adoption in production tasks, not just transporting fancy video

Timing in IP Production – on the Ground and in the Cloud

This session will look at the existing timing mechanisms baked into IP media connectivity standards and specifications and how these are typically used in system deployments. We will look at these alongside the ideal requirements of a full system.

As more of the production chain becomes virtualized, these timing requirements need to be able to be realized in both broadcast appliance infrastructure and virtual server infrastructure (local or cloud based).

We will explore some of the technical work still outstanding to realize end-to-end time-aware systems that can deliver the true potential of fully 'time savvy' solution architecture.

Introducing the RIST Advanced Profile: Professional Class Features for Media Enterprises.

The Reliable Internet Stream Transport (RIST) Activity Group in the Video Services Forum (VSF) was formed in 2017 to create a common industry specification for low-latency, professional-grade media transport over the Internet. Since then, the Activity Group has published VSF TR-06-1 (RIST Simple Profile), which focuses on the reliable delivery aspect, and VSF TR-06-2 (RIST Main Profile), which adds security, authentication, tunneling and other features to RIST Simple Profile. This presentation is a preview of the upcoming VSF TR-06-3 (RIST Advanced Profile), the next step in the evolution of RIST. Among other features, RIST Advanced Profile includes a protected tunneling mode that can carry legacy protocols, as well as some additional security features. The presenters are active members of the group and have contributed to the design of the Specification.

Delivery of STLTP seamlessly over multiple Links.

Studio to Transmitter Link Tunneling Protocol (STLTP) is a protocol defined by ATSC group under specification A324 to provide the IP based delivery to two main locations: the studio and the transmitter site. There are two basic delivery paths: the microwave and the IP network, one or both may be used to interface between the Studio to Transmitter (STLTP). Both are IP based delivery but it is a challenging endeavor to make it work seamlessly. While sounding straightforward, there are many challenges to overcome:

How to reduce network jitter?

How to do seamless switching or load share between Microwave and Internet for non-interrupted service.

The presentation will cover the basic A324 guidelines for STLTP delivery and the problems that arise, Packet recovery, jitter recovery and more. The presentation will also cover two use cases: Microwave and Internet working in tandem.

Two microwave delivery working in active and Protection supplement. The Technique is using secure and reliable Streaming method.