

EBU Networks Seminar 2011

4 Tutorials on:

Broadcast media for network specialists

Félix Poulin, EBU

A back-to-basics tutorial to go through the characteristics of traditional TV and Radio media that need to be preserved over IP/IT infrastructure.

Among the concepts that will be discussed are: Quality, Real-Time, Frame Accuracy, Audio-to-Video Synchronisation, Guaranteed Bandwidth, Deterministic versus Probabilistic nature of protocols, De-interlacing, Geometric Distortion, Colour Space Conversion, Gamma Curve Correction, Dynamic Range, Loudness, and more.

The tutorial approach will favour interaction with the participants who will be invited to share their experience and challenges.

Audio over IP, standards, protocol soup, best practices for migrating from ISDN

Lars Jonsson, SR and Mathias Coinchon, EBU

The tutorial covers basic protocols and methods for Audio over IP contribution. The EBU Project ACIP, has issued an interoperability document, TECH 3326. More than 15 manufacturers worldwide have implemented this standard. Swedish and German radio broadcasters have begun building an audio over IP infrastructure replacing ISDN and SDH/PDH over internal well managed LAN and WAN IP-networks. This development is based on the EBU-standard and SIP, the signalling standard which enables easy dialing between IP audio end units. Current topics will be discussed and we welcome experiences from the audience.

Video over IP, standards, protocol soup, best practices

Yuan-Xing Zheng, BBC and Andrew Rayner, Nevion

The Video over IP tutorial will cover the basic applicable protocols and standards. It will start from a short introduction on latest video codec development especially on H264 and J2k. It will be followed by a detailed session on the SMPTE 2022 family for encapsulation and FEC, their design principles, application guide, and practical implications. How to allocate QoS, understand your bit rates (impact of video over IP overhead), and how to measure end to end latency will also be illustrated in detail. Different kinds of network solutions (L2, MPLS etc) will be discussed together with the challenges of real time provisioning. IP flow monitoring and protection will also be explored. And finally, we won't forget to discuss the all important associated issue of options on handling the audio.

The tutorial is designed to be interactive, so please come along with your questions and challenges!

Media Storage Fundamentals – How to guarantee predictable performance

Luc Andries, VRT/CandIT-media

The Media Storage Fundamentals tutorial aims at providing the necessary insight in storage to be better armed to correctly interpret the specifications provided in commercial/technical datasheets of 'media storage offerings'.

Starting from the interaction between three basic elements in a media storage environment, namely the media file system, the elementary storage elements (the hard disks) and the network in between that has to transport the data, relevant parameters of each component will be highlighted. This will allow us to create a predictable model of the behaviour of storage in media.