OPINION

Striving towards interoperability

Mikael Vest, sales director, NTP Technology explains how to achieve high-performance professional AoIP networking

The first use of Ethernet as a medium for interfacing real-time audio was Park Audio's CobraNet, introduced in 1996. That was followed by other proprietary formats such as Livewire from the Axia Audio division of Telos, Q-Lan from QSC and WheatNet-IP from Wheatstone. A variety of other proprietary formats have since emerged. These include Audinate's Dante in 2006 and ALC's Ravenna in 2010, both based on IP Layer 3. The only actual standard for Audio over IP (AoIP) until recently has been the Audio Video Bridging (AVB) set of recommendations promoted by the Institute of Electrical & Electronics Engineers in co-operation with the AVnu Alliance. The IEEE's AVB is based on Layer 2, but this has not yet evolved into IP Layer 3-based format.

Providing interoperability between existing AoIP formats is quite a challenge. Development of a universal AoIP standard within the existing standardisation groups is very comprehensive, as the complexity of an AoIP implementation is far much higher than, for example, the AES/EBU and MADI standards which we currently have in the audio interoperability field. However the AES67 standard published by the Audio Engineering Society in 2013 has actually succeeded in specifying the means for exchanging audio streams between areas with different networking solutions or technologies. These are already in place based on existing and standard protocols and technology from the IEEE, IETF as well as other standards developing organisations.

The non-profit Media Network Alliance has been formed by manufacturers and technology providers to promote and support the adoption of AES67 in the industry. This is clearly a sign of the success of the AES67 standard. The intention was not to invent new protocols or technologies but to define how to use existing protocols as a system in an interoperable manner. Other trade organisations like Alliance for IP Media Solutions (AIMS) have defined a roadmap to common standards for IP media, recommending AES67 as the format for 'discrete audio' in a video/audio media and broadcast environment which is also specified in VSF TR-03 and TR-04 technical recommendations.

With AES67, the industry now has a means to provide interoperability for high-performance professional digital AoIP networking. Support from organisations such as the MNA and AIMS will facilitate the adoption of AES67 across the industry. In the end, the users who are faced with the task of deciding between the various AoIP solutions on the market will know that interoperability and interconnection between different systems are possible via the available AES67 interface implementations. However, one important thing to know is that AES67 does not cover aspects of an AoIP system such as node advertisements and discovery. This functionality typically is largely specific to the networking solution or technology of the individual system. Yet, it can be expected that the various IP-based solutions will enhance their capabilities in order to adopt an AES67-compliant stream mode to facilitate inter-system interoperability, allowing multiple advertisement and discovery schemes in order to enable interoperability with more system solutions. Certainly, the commonalities defined by AES67 can be seen as the 'glue' between these various networking solutions. **8.B51**

Flexible FM monitoring

2WCOM

The A30 FM monitoring device is the successor to the A20 and offers multiple, simultaneous supervision functions

By **Mark Hallinger**

The new A30 system is equipped with two professional FM tuners able to be used independently. Operators can, for example, use the two tuners to simultaneously monitor two FM stations day and night, but can also let the second tuner monitor up to 30 broadcasting stations using its scan mode in round robin fashion. When in scan mode, the system lets operators effortlessly configure station order and measurement time via the new user-friendly web interface. The A30 features an audio input (which can be monitored), one MPX input (which can be monitored in parallel to the two tuner signals), two audio and MPX outputs and two MP3 streams, allowing monitoring audio from a distance.

In addition, the A30 can also work as a back-up rebroadcast receiver, monitoring the external input signal and in the case of signal degradation, switch the output source to one of the internal FM tuners. If the signal degradation is no longer existent, the A30 automatically shifts back to the external input source. **8.E78**

HEVC and UHD updates for LifeTSAFT

C2m Solutions

By **Will Strauss**

The LiveTSAFT analysis and error detection software has been updated to support both HEVC and Ultra HD.

On show at IBC, LiveTSAFT is used to monitor an MPEG2-TS stream in real time and allows QoE (Quality of Experience) and QoS (Quality of Service) management along an IP network. According to its developers, C2m Solutions, the LiveTSAFT technology was used to monitor the Ultra HD broadcasts of football matches in France during Euro 2016.

At IBC, C2m Solutions is also showing OTTLiveTSAFT, which analyses and detects errors in real time on an OTT stream. This product has also been updated to support HEVC and UHD.

A third offering, TSAFT, designed to analyse VoD and catch-up TV content, is also available. This application allows for the upstream verification of content, checks conformity and prevents any corrupted files from being distributed.

TSAFT supports both MPEG TS and MP4 formats and is said to be able to analyse 800 hours of HD content, approximately 3.5TB, per day. Again, it now supports UHD and HEVC.

The TSAFT software can be integrated into a Service Oriented Architecture (SOA) platform through a web service. It can also be fully automated. **2.B39**

MAG STBs and middleware unveiled

Infomir

By **Anne Morris**

Infomir is presenting new models in the MAG set-top box series, as well as a new version of Stalker Middleware.

MAG256w1 is a basic set-top box and the successor to Infomir's MAG254. Its more powerful processor responds to market demands of high-quality content playback. MAG350 and MAG352 are premium set-top boxes based on a Broadcom chipset. Both support HEVC compression while MAG352 can also playback 4K video. All the STBs feature in-built WiFi.

Stalker Middleware is designed to support IPTV or OTT services. It is free and includes a number of updates such as multiscreen support, picture in picture, task manager, new applications and a new video club module. **14.L09**