

APB MANAGEMENT

Axon enhances its Synapse multi-viewer

The Netherlands-based Axon said its modular infrastructure and communications system, Synapse, has been enhanced with the release of the GQW200, a 3Gbps HD, SD-SDI quad split to QWXGA converter, which forms the building block of the modular multi-viewer.

The GQW200 quad-split cards can be used to build a very flexible multi-view system. A multi-viewer can easily be expanded by the addition of another GQW200, resulting in an eight-channel multi-viewer — as every additional GQW200 provides an additional group of four channels.

Axon will also release a HQW200 (HD/SD version) and SQW200 (SD only). Both HQW200 and SQW200 are designed in such a way that they can easily be upgraded to handle 3Gbps signals. A tally-and-UMD on-screen display is also part of the compact monitor solution.

Keeping of track premium content

To keep track of revenue-generating content, broadcasters are turning to technology to monitor and manage programming deployments.

Technology not only paves the way for more broadcast delivery platforms, but it also widens the scope and reach of TV programme deployments.

For example, satellite service providers now enable direct-to-home operators to offer niche programming to various multi-cultural markets. The same delivery platform has also enabled global content providers like Disney or CNN to broadcast selected programme bouquets to key markets not only in the Asia-Pacific, but to other regions as well.

However, deploying thousands of hours of content to different markets around the globe would require broadcasters and content provid-

Beyond

BY JULIUS PERL

The ability to monitor and record off-air video and audio content — long a critical requirement in broadcasting and cable MSO operations — has been fundamentally improved by a new generation of digital, Web-based solutions that eliminate physical storage media. Many benefits are offered by these new monitoring systems to broadcasters and cable operators worldwide.

Not so long ago, most broadcasters were relying primarily on analogue video recording devices to manually record broadcasts onto VHF tapes. While relatively inexpensive, these solutions are cumbersome and lack flexibility, and they provide no effective means for searching, retrieving and sharing video clips.

In a typical analogue operation, the tape library consumes a large physical space, with operators spending hours every day searching through the taped material to find the clips they need.

Running on the broadcaster's existing IP network, new-generation video monitoring systems automatically capture, store and index off-air video in MPEG-4 round the clock and make it accessible from every desktop in the organisation. These solutions automate many tasks that were previously manual and time-consuming with tape-based systems, to bring new efficiencies to such critical functions as regulatory compliance and fault detection and correction.

DVS presents new Spycer version

Germany-based DVS' Spycer version 1.3 data management software now provides Mac OS users with an intuitive content management solution. New features like job scheduler, 3D LUT preview and virtual burn-in make Spycer 1.3 a convenient tool for professional content management.

In addition, the application, which also works for Windows and Linux OS, offers other new features to simplify the browsing, editing and management of image data and metadata. DVS said Spycer 1.3 not only offers a reliable job scheduler, new search features and an optimised preview section, but also supports formats such as QuickTime and OpenEXR.

PANELLISTS



Stephen Wong
Vice-President of Sales
Asia Pacific
Harris Corporation



Gabriele Di Piazza
Managing Director
Media & Entertainment
Business
Communications Sector
Microsoft Corporation

kets around the globe would require broadcasters and providers to keep track of which of their content gets broadcast to where, and when. Not keeping proper tabs on content deployment would mean content providers losing out on precious revenue.

The challenge of managing huge amounts of content again falls on the shoulders of technology providers who have come up with various solutions to achieve this task.

One such solution is digital watermarking, and it looks like the industry also agrees that this technology is acceptable. US-based research firm MultiMedia Intelligence reports that applications leveraging content identification technologies such as digital watermarking and fingerprinting are growing rapidly and could surpass US\$500 million worldwide by 2012.

The key applications for this technology includes the Internet and broadcast content monitoring, metadata association, copyright control, content protection and forensics, and interactive advertising.

Mark Kirstein, president of MultiMedia Intelligence, says: "Non-linear media distribution requires new enabling technologies, beyond traditional encryption-based digital rights management (DRM). The growth of peer-to-peer distribution, social networks and content piracy is accelerating the need for watermarking and fingerprinting."

The research firm also says that digital watermarking would complement DRM and conditional-access technologies. Thus, companies such as Cinea, Philips and Verimatrix are positioning transactional digital watermarking for integration in set-top boxes to increase content traceability and security.

This goal, MultiMedia Intelligence adds, is to convince content owners to support earlier release of HD video assets for video-on-demand and enable incremental revenue for pay-TV operators. The report reveals that US content provider Fox has already communicated that it will mandate watermarking for early-release HD content.

In the course of its research, MultiMedia Intelligence found out that content owners are continuing to pressure Web properties and other network owners to police their content as a result of the proliferation of "user-generated content" and social networks, coupled with users posting copyrighted media.

Thus, the research firm predicts that fingerprinting and watermarking will play a pivotal role in broadband operators' developing plans to filter peer-to-peer (P2P) traffic on their networks to restrict copyrighted material that is being illegally distributed.

MultiMedia Intelligence also sees digital watermarking becoming a key enabler for tracking non-linear interactive advertising, supporting ad association, tracking and reporting in the future. **APB**

pliance and fault detection and correction.

Unprecedented ease-of-use for transmission monitoring

Today's digital monitoring systems are capable of recording multiple channels in MPEG-4 format, and then making the content available in real time to Web browser users. The multichannel recording capability is especially critical for cable network operations centres (NOCs), which typically need the ability to scan several hundred channels at once, a near-impossible task for even the most capable of engineers to perform manually.

The monitoring system can be configured to detect transmission errors such as black screen, frozen or no video, or audio faults within pre-defined thresholds. When an error is detected, the system automatically sends an e-mail alert to the operator on duty, together with a clip of the offend-



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videotape: Web-based monitoring systems

ing video, for resolution — enabling the station to diagnose, correct and recover from the error in a fraction of the time of tape-based methods.

At US-headquartered Discovery Networks, the producer of popular cable channels such as the Discovery Channel, TLC and Animal planet, state-of-the-art systems provide round-the-clock monitoring of 28 SDI channels and four HD channels, recording the satellite downlinks of each channel as it airs and giving operators the ability to view the same content as Discovery's cable headends are receiving.

Japanese TV station Kumamoto Asahi Broadcasting (KAB) especially appreciates its monitoring system's VCR-like controls, which enable engineers to play out content frame by frame to check for errors.

Streamlined regulatory compliance

The ability to prove compliance with broadcasting regulations in an efficient, timely and comprehensive manner has dogged broadcasters for decades, but Web-based recording systems have made these concerns a thing of the past. Broadcasters from around the world have documented recent successes. For instance, the monitoring system at KAB has better equipped the station to meet a Japanese requirement that all on-air broadcast content must be archived for three months.

Regulatory requirements are not confined to the government realm. For example, KFMB-TV, a CBS affiliate in San Diego, California, USA, uses its recording system to provide verification of compliance with the station's agreements with performance rights organisations such



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as the American Society of Composers, Authors and Publishers (ASCAP) and Broadcast Music Inc (BMI).

With Web-based recording systems, TV stations can automatically record content round the clock for at least 90 days, and most systems have the ability to easily store older materials offline on DVD. The systems provide easy search and retrieval (the Volicon Observer, for instance, provides a search scheme based on the content's closed captions), and the clips in question can easily be exported and sent to enquiring parties via e-mail.

Valuable competitive weapon

Many Web-based recording systems provide the capability to monitor competitors' broadcasts in real time and to compare their on-air performance with their ratings on a minute-by-minute basis. Broadcasters can per-

form a cross-comparison across multiple channels to gauge viewers' interest in the content airing for each station at a given time.

At Israel-based Keshet TV, the station is able to capture viewer-approval ratings in synch with its own real-time video as well as that of its main competitor's, for a side-by-side comparison of audience behavior and viewing patterns. This vital competitive intelligence feeds into the station's overall research efforts to help develop market share-driven scheduling and programming.

At Discovery Networks, the monitoring system's content export feature allows engineers to download video clips and e-mail them to any interested party, such as advertisers who want to verify that a commercial is aired in full and on schedule. The system automatically records viewer-measurement ratings and closed captions, providing a valuable and searchable archive for Discovery business managers and others who are researching the network's performance.

As exemplified by the Volicon Observer, Web-based monitoring and recording systems are rapidly moving from the "nice-to-have" to the "business-critical" column for today's broadcast operations managers. A vast improvement over analogue, tape-based devices, these new systems are bringing new efficiencies to broadcasting operations through automatic capture, storage, retrieval and sharing of aired content.

Julius Perl is vice-president of marketing at Volicon.