How KVM will impact broadcast technology trends in 2016

BY TERENCE TENG

Broadcasting has reached a new phase in its evolution: we are constantly hearing about next-generation IP-based workflow models and the move to network-delivered content. Studios and OB trucks are currently under construction that use IP end-to-end; live events are being shot hundreds of miles away from the production studios, with content streams delivered over IP networks, to be mixed and produced using powerful computer-based technology.

With 4K/Ultra HD (UHD) set to become the next broadcast standard, and with 8K and higher resolution expected in due course, the ability to manage video in the linear domain is becoming more complex and unaffordable — to the point of unsustainability. 4K/UHD, quad HD, if run over existing 3G infrastructure, requires four times as much wiring as HD, a router that is four times larger and so on.

This is further compounded by the requirement for more sophisticated processing, for example, HDR and HFR, and the need to transmit in multiple formats to an expanding range of consumer devices. Hence the drive to more efficient network-based workflows.

KVM fits into this new regime, which can already be considered to be past the stage of trend and approaching mainstream, by offering and delivering a high level of flexibility and adaptability to operators and in streamlining the broadcast workflow.

Essentially, what KVM offers is the ability to create 'vanilla' workstations that are totally detached from the specific application being run at any time, yet provides unrestricted access with picture-perfect quality, no latency and instant switching between several relevant applications; all from the same console.

It allows any user, whether a producer, picture or sound engineer, editor or special effects technician, to carry out his or her work from any physical location: any desk, anywhere within a facility, and on servers and equipment that are remotely located, safely and securely in a controlled environment.

Therefore, the KVM system is now considered as an essential infrastructure of every new studio, truck and editing facility, and thus the demand for ever-larger switches. Our current largest single chassis switch has 576 ports. It is set to expand more with the continued evolution to IP-based workflows — as new techniques and processing requirements call for greater amounts of dedicated computing equipment.

KVM technology does not control the broadcast workflow, it does not manage it, nor does it provide any element of picture processing or editing. What it does, highly effectively, is enable users responsible for those fundamental processes to work to the best of their ability in the most efficient and effective manner.

Terence Teng is managing director of IHSE Asia-Pacific.

Aspera and Irdeto enable real-time watermarking

A new partnership between Aspera and Irdeto will enable forensic watermarking capabilities that insert watermarks in real time, with no impact on delivery quality or speed, said the companies.

By combining Irdeto Tracemark with Aspera's FASP transfer technology, content owners and distributors can "rapidly and efficiently" deliver and receive content all over the world while protecting it against redistribution piracy.

The content industry needs a fast and secure way to deliver content and be able to trace and track it throughout its lifecycle, explained Richard Frankland, VP of Americas, Irdeto. "Forensic watermarking is an essential security element of a comprehensive content protection programme. For the first time, Irdeto's partnership with Aspera with bring together industry-standard content distribution and security technologies into an end-to-end solution with comprehensive managed services," he added.

Aspera's FASP technology securely moves large files at maximum speed, and through the new alliance, it will incorporate Irdeto Tracemark, an invisible mark embedded to identify each individual content stream. Tracemark works

with Irdeto's Online Piracy Detection Service to make it quick and easy for content owners and broadcasters to trace back to the source of a leak.

The Irdeto-Aspera partnership was essential in order for Fox to deploy a forensic watermarking solution, without affecting the user experience and having minimal impact on Fox's workflow, revealed Ian Harvey, SVP Advanced Technology, Twentieth Century Fox. He explained: "This managed service and end-to-end solution will greatly impact the transfer of large forensically marked files to our customers, allowing for rapid sharing while enabling premium content tracking to help manage redistribution piracy."

Aspera's joint solution with Irdeto represents an "exciting progression" in the use of forensic watermarking in combination with high-speed data transfer, said John Wastcoat, VP Business Development, Aspera. "In even the most difficult of broadband environments, we give content distributors a more efficient way to offer high-quality movies and TV shows, without forsaking the advanced monitoring and detection capabilities that watermarking brings."

Axon highlights fully customisable control and 4K production

Axon is offering its broadcast customers a range of solutions in 2016, including the Cerebrum control and monitoring software.

At this month's CABSAT 2016 in Dubai, Axon is showcasing its Cerebrum control and monitoring software.

Now a key feature in numerous broadcast facilities around the world, Axon says Cerebrum is fast becoming the control solution of choice for mobile production, news and studio live production, master control and remote production.

Recent deployments of Cerebrum include eTV in South Africa, News UK's broadcast facilities in London, Metro TV in Indonesia, and major international sports productions, including the 2015 Open Golf Championships, BT Sport's 4K/Ultra HD (UHD) coverage of the UEFA Champions League, and Timeline's upcoming production of the Dubai World Cup, the foremost event of the international horse

racing calendar taking place this month.

According to Axon, Cerebrum's advanced functionality and broad range of features is ideal for complex events like the Dubai World Cup Carnival because it simplifies multi-device monitoring and control onto one easy-to-use interface.
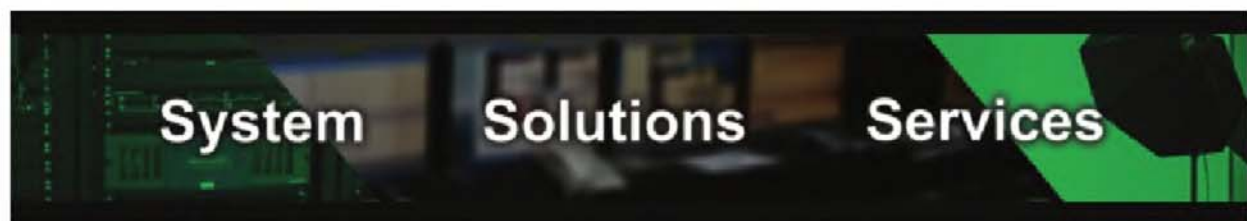
Cerebrum supports a wide range of devices from different manufacturers, including routers, production switchers, servers, receiver decoders, multiviewers and waveform monitors, using either SNMP (Simple Network Management Protocol) or third-party protocols.

Axon is also using CABSAT 2016 as a platform to demonstrate a range of 4K/UHD products and production tools that are designed to help broadcasters deal with the

challenges of the emerging format.

As momentum builds for 4K/UHD TV, Axon has introduced additions to its Synapse signal processing line, including a 4K/UHD up/down-converter, a distribution amplifier and two production 'Tool Boxes'. Both U4T100 and U4T140 tool boxes carry Vanc and Hanc data such as timecode and embedded audio; the U4T140 also provides a Dolby encoder and decoder.

Also on display at **booth 1B1-30** is TIDE, a new high-performance multi-codec, multi-format, modular processing platform for the contribution and distribution of live video. Developed for network service providers, news organisations, programme distributors and bouquet providers, the new TIDE series provides "high-quality, reliable" contribution and live streaming.