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By David Kirk

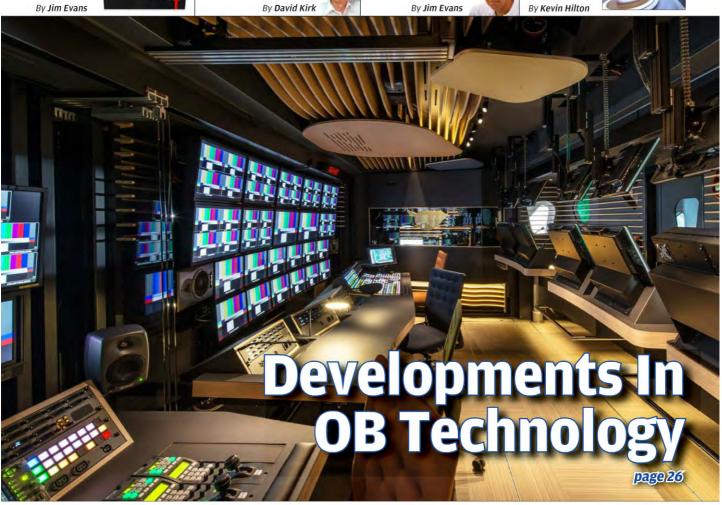




Graphics









# IHSE - The Rise Of KVM Technology



**Enno Littmann**, the Managing Director of IHSE, examines the latest developments and directions in KVM technology...



InBroadcast: It was clear to this year's IBC visitors that KVM is becoming more prominent in the broadcast industry. Why is this?

Enno Littmann: IHSE, along with other KVM manufacturers has experienced rapid growth in this market sector over the past five years. We have been active for a longer period, but it has not been so apparent. This year, and to a lesser extent last year, it was noticeable that broadcasters and system integrators were approaching us to talk about the technology, whereas in the past they would not have been so aware of the potential.

The reasons are that engineers in broadcast studios, trucks and post houses are treating file-based content and applications in a manner similar to the way it is in commercial data processing organisations, and managing their assets in a secure, controlled and flexible way. That means locating all the servers and computers remotely and giving

restricted access to users as they need it, rather than spreading it around a facility on local devices.

## InB: KVM usually refers to extenders, what is the latest technology?

KVM simply referred to the, mainly analogue, equipment that extended the distance between a computer console and the user screen and keyboard/ mouse; allowing them to operate a remote computer as though it was under their desk. There were, and still

are valid reasons for doing this and our extender components are still used in a point-to-point relationship in many situations in many industries. As

digital KVM devices were developed new opportunities were opened up and KVM matrix switches came into being.

The inclusion of a KVM matrix switch creates enormous possibilities by enabling any authorised user to access every computer connected to the switch.

Matrices are available now in discrete device and modular form that allow any number of ports from eight to 576, and each can be configured dynamically to suit the installation as

an input or output. Instant, latencyfree and artefact-free video is then available to all users within a facility using copper or fibre connection, and even between distant sites several kilometres away.

Multiple matrices can be connected together in a grid which, opens even more potential. An example of this in the broadcast world is in the Game Creek multi-truck Sprit and Riverhawk series of OB vans. Operators can sit anywhere and use a virtual workstation, rather than right next to the production gear. Matrix Grid links between separate matrices on individual A and B units allows complete flexibility in configuration to suit an event – whether it is a major Nascar meeting or the US Open for Fox Sports.



Game Creek's multi-truck Sprit and Riverhawk series of OB vans utilise IHSE technology

InB: I understand that the KVM matrix switch handles data routing in a similar

manner that the video router handles video feeds, can the KVM matrix also route video?

EL: That's an important point. There are many instances where HD-SDI is run alongside the control system - in an editing environment for example, an editor might switch between FX and DX, or to a different platform and the preview feed would need to follow. This can be achieved simply in the Draco tera switch with the Universal I/O module. Basically, a video route is assigned in parallel with the editing control path so that the associated preview screen switches at the same time. Again, this is achieved with no switching delay, latency or visual artefacts and is a common application in many of our installations around the world.



Draco tera KVM matix switch

#### In**Reply**

### IHSE - The Rise Of KVM Technology cont'd...



#### InB: How does a full KVM switch benefit broadcasting organisations?

**EL:** There are several advantages.

Primarily it allows valuable data and applications to be stored and managed in a controlled environment. Studios already have central equipment rooms for video asset management and can co-locate computing equipment alongside. This restricts physical access of equipment, preventing unauthorised access, removal of data and the threat of virus infection.

Secondly, to connect to a device, the user simply needs to access a 'dumb'

workstation, comprising keyboard, video screen and mouse or other pointing device. This can be anywhere and does not need to be designated to a specific task.

engineers, editors programme schedulers can access any tool from any computer at any location; leading to complete flexibility in facility layout, sharing of editing suites and studios, and simplified access to any application from a single workstation. It is no longer necessary to unplug and move computers around in order to change the production

layout for an event, so setup and configuration is a much quicker and more effective process. It can be preprogrammed and stored which allows rapid changeover between events and sharing of studios between different genres of broadcast.

Thirdly, it makes for a much better working environment - less floor space taken up by equipment and less desk clutter as there is just one workstation and keyboard/mouse for multiple tasks. And, of course, noise and heat is reduced, which is particularly important in studios and sound editing suites.

#### InB: How are you interacting with other equipment vendors?

some time integrators have been asking for interface technology to smooth and efficient interaction between broadcast devices and KVM switches: drivers and protocols that enable easy access to broadcast devices and applications, and to allow external controllers to manage the switching paths. We work closely with broadcast device manufacturers to

ensure compatibility and interact with common broadcast control systems: including L-S-B's VSM and BFE's KCS.

More recently we worked with Avid to develop the switching interface for their Pro Tools|S6 control surface. This allows operators to switch source devices using assignable keys on the control panel, and was brought about by industry demand - several major users requested the ability to do this and we responded accordingly.

#### InB: What about 4K?

EL: Nobody can ignore the impact 4K will have on broadcast infrastructure and workflow.

Our first step was a collaboration with Fraunhofer IIS to develop the innovative lightweight image (Lici®) codec which is used in the new Draco Ultra extender - the first on the market to extend video at 4K 60Hz full colour 4:4:4 resolution.

This is already available and being deployed.

Naturally we have further plans watch this space!

InB: Thank you for your time.



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