KVM switching systems in the broadcast workflow:
Specify and install early in the integration process

BY TERENCE TENG

The complex task of broadcast systems integration

Planning and integrating a major broadcast facility, whether in a fixed studio or mobile outside broadcast (OB) vehicle, is an enormous undertaking and one that requires significant and highly detailed planning. The whole process — from initial concept to final delivery and going live — often spans several months, if not years, and often involves dozens of people. Several different organisations will be involved in the project, each with their own specific expertise and who are reliant on others to help schedule and complete their own tasks.

System schematics can span dozens of pages. The parts list usually stretches to thousands of items and covers a wide range of components, from the smallest plug and cable to the large switching systems and network devices. All these individual items have to be connected correctly and need to work with other subsystems in the broadcast workflow, many of which will need individual configuration and bespoke software design. This results in a complex integration workplan comprising hundreds of individual tasks, with significant inter-dependence between them.

With an integration process that takes months of sustained and concentrated effort, it is essential that all elements within the design are correctly specified, ordered and received in a timely fashion. As we are all too aware of, a delay in almost any item can adversely affect final completion of the system, with the associated knock-on effects of delayed launch and additional cost.

Don't forget the KVM switch

It is worrying that we sometimes receive calls from integrators who have delayed the specification of the keyboard, video and mouse (KVM) switch system until the end of the project. That is a situation often brought about by the sheer complexity of the total project but sometimes, in the very worst cases, simply because it has been forgotten. Naturally, we do all we can to help, by assisting in the specification of the required system and encouraging our production department to pull out all the stops to deliver the products and solutions as quickly as possible. While the extra overtime is welcome, any suggestion of curtailing long-awaited holidays does not go down well!

KVM at the centre of the broadcast workflow

The KVM system sits at the heart of every broadcast installation — without it, the facility will not work. It provides immense benefits to production, editing, engineering and operational staff, allowing them to reach and operate remote broadcast devices from their own workstations on their own desks, or indeed, from any convenient workstation in the building. They can access each and every device in the broadcast workflow without having to move around the

IHSE is one of the leading vendors of KVM extenders and switches used throughout the broadcast sector: from small satellite newsgathering (SNG) vans to the largest OB trucks and broadcast installations, and across all sizes and types of audio and video production, post and editing studios.

facility, which is welcomed by many, especially those who work in the cramped and busy confines of a live TV studio or OB van.

Not only does a KVM switching system aid operators, but it can also save costs by enabling expensive hardware and software to be shared among users and employed as needed, rather than requiring that each individual operator is supplied with their own set of tools.

IHSE is one of the leading vendors of KVM extenders and switches used throughout the broadcast sector: from small satellite newsgathering (SNG) vans to the largest OB trucks and broadcast installations, and across all sizes and types of audio and video production, post and editing studios — including some of the most well-known in the industry. We work closely with major component vendors, including market-leaders in the industry such as Avid, EVS and Vizrt, to ensure that the combined systems work well together.

Use the KVM switch to aid the integration programme and reduce timescales

The features that improve the working environment of the broadcast installation can be used to make it easier for integrators to carry out the system integration programme. A useful benefit to the integrator is that the KVM system is highly flexible and can be operated and expanded as devices and users are added. It can be used as soon as it is installed, well before the full broadcast system is up and running.

That means it can help greatly in the systems integration process by enabling engineers to easily manage and control devices as soon as they are connected through the KVM switch. They can then undertake the configuration and integration of those devices from any location, no matter how remote, without having to wait for a local workstation to be installed or become usable.

This makes the process more efficient — there is no need to wait until a dedicated workstation is fully operational and the area around it cleared. An engineer can access a remote device for configuration and set-up from anywhere, allowing installation and set-up tasks to be carried out and completed in parallel with others, thereby reducing the overall project time.

Adding to the flexibility

The key element of a KVM switch is that

> **"The KVM system sits at the heart of every broadcast installation — without it, the facility will not work."**
>
> — **Terence Teng**
> Managing Director, IHSE APAC

it enables every operator to instantly connect to any device. Consequently, connections between individual workstations and remote computing devices do not have to be defined prior to integration and wired accordingly. Nor do they have to remain fixed over time. This adds greatly to the flexibility within a broadcast installation. Studios and OB vans can be quickly re-configured to match the type of programme they are dealing with at any time. It also allows new devices to be added and integrated into the working environment with minimum disruption and maximum effect.

And during integration, the proposed system can be adapted and changed to overcome changes in requirements or to overcome problems in machine-to-machine connectivity.

KVM in the broadcast environment – consider early and use to maximum effect

With the enormous capability and flexibility offered by KVM switches and extenders, it makes sense to take advantage of these highly useful solutions when designing, integrating and operating complex broadcast systems.

KVM systems should, therefore, be considered at the earliest stage of design and be installed at the earliest opportunity. That way, the job of the systems integrator can be less stressful and more productive. And the workflow can be easily and quickly enhanced, adapted and improved to meet the requirements of tomorrow's broadcast industry. *APB*