ihse.

Esports Venue
Summit 2020
Q&A

eSPORTS
VENUE SUMMIT

QUESTIONS & ANSWERS

Brief overview about the company and the different solutions that you offer?

IHSE is a highly successful company that designs and manufactures KVM extension and switching products. It was established over 35 years ago at its current location in southern Germany.

The company has experienced phenomenal growth as the demand for this type of product and has expanded massively over the years.

KVM technology is particularly applicable in installations that require high reliability, high quality video distribution and access to remote computer systems. IHSE solutions are deployed widely across broadcast, maritime, air traffic management, government, communications and utilities. Users benefit from the ability to physically separate source computers from users and enable instant, reliable and secure switching between multiple devices.

One of the most important benefits lies in the ability of users to select and instantly connect to any of a set of connected computers, at will and without limitation. This means that any user can operate any computer system without having to move location. Crucially it is a direct connection that does not suffer the inconvenience or lag associated with IP connectivity. In the stressful, busy environment of live gaming and broadcasting that is a tremendous advantage.

IHSE Draco tera Matrix Switch

When did you firstly identify esports as being an applicable market that would benefit from using your technology and can you describe how your solutions can be used for live esports events?

As a manufacturer our activities are largely driven by market demand and requirements. The first enquiries from system integrators and specialists came sometime in late 2017 for some massive arena event projects to be run in 2018. Live gaming events can attract tens of thousands of attendees in the stadium itself and further large numbers viewing online. To stage events of this nature requires complex professional equipment.

There are two distinct areas of operation at a large event:

■ Firstly there is the on-site audiovisual production that delivers images around the venue: to players, spectators and observers. Live streams also need to be passed to the commentary positions and on to the broadcast centre for external transmission. Much of this imagery is running at high framerate; at 240Hz and needs to be displayed at that rate. Other devices, videowalls, scoreboards and general displays still run at 50/60Hz.

Whilst we don't focus on the equipment that processes the pictures (aside from one specific device), we are involved in distributing content and directing it to the correct location and screen – whether that is the player's console or giant video wall above the stage.

■ Then there is the broadcast element of the event. Live broadcast programming is produced and fed to online streams and sometimes traditional over-the-air broadcast. This includes live action, player and audience shots, commentary and slow-motion replays. Gaming streams are passed to generic broadcast equipment to create these productions. Our technology has been a fundamental part of the infrastructure of numerous broadcast studios and outside broadcast trucks for many years and is used widely to manage, access and control the broadcast workflow. So this is an extension of what we already do.

KVM technology bridges the audiovisual and broadcast elements of a large-scale live esports event.

Who are the different kinds of people that you would typically work with during a live esports broadcast? How important is communication and project management both pre-event and also onsite?

Again, this falls into two areas:

■ The first group of people we work with is the show production team that manages the on-site facilities. Particularly the live-event aspects of it with pre-recorded video material, special effects and image routing to players and observers. Much of the work is prepared prior to the event and it is particularly important to work with the designers and operators to help them create what they want to achieve on the day.

■ Then we work with the broadcast specialists to create the workflow and production infrastructure to suit the broadcast objectives for the event. This is a very similar process to that encountered in the familiar TV industry and well understood by our dealers and integrators.

What were the key lessons that you learnt from working on your first esports event and did these help shape the solutions that you offered for the esports market?

Perhaps the most important lesson was that the people involved in developing these events have enormous creative ambition. They have brilliant ideas and enthusiasm to seek out solutions. So we have to be responsive and creative in return; to find solutions, no matter what the requirement.

On a practical side there are always technical solutions to be found. An example is the need to bridge the live gaming AV side to the broadcast transmission. An example of this led to the new product, hinted at earlier. Gaming operates at 240Hz, broadcast at 60Hz; the requirement was for a device that could record and play back player sequences in slow motion – without losing valuable and essential frames and hence gaming moves. We worked with EVS on this – one of our long-standing broadcast partners and, as you already know, the leader in broadcast slo-mo technology.

Together we developed a solution that works in conjunction with the EVS Dyvi production switcher and splits the 240Hz signal into four parallel 60Hz streams and allows the whole of the content to be recorded as synchronised data across four XT-VIA recorders. This device also extends signals to the large arena screens and other video feeds that require 60Hz or 240Hz video.

From your experience, what are the key factors from a broadcast and production perspective when it comes to delivering a live esports event?
Any fundamental differences from live traditional sports events?

There is no playing surface, no physical field of play. Traditional sports events occur on a pitch or court and the objective is to follow the action. In esports the action occurs simultaneously in a series of computers and somehow a story has to be created around that virtual imagery. As a consequence there is more reliance on the production team to thread everything together, including the live elements of player and audience reaction to the on-screen action. Technology moves more to the front and centre.

What are the main features that make your solutions a good match to the live esports event industry?

KVM extenders enable gaming computers to be physically separated from gamers. This has several benefits: it means that operator and gaming workspaces are less cluttered and quieter without the computer base units getting in the way and creating heat and noise. These units can then be located at a distance away from the arena in secure backroom areas. This means that the computers can be racked in environmentally controlled areas where there is no possibility for illegal software to be loaded onto games machines – which we understand may have happened in the past. It also allows backup systems to be swapped in without on-stage disruption.

The addition of a KVM switch into the event production infrastructure adds operational convenience and efficiency because any of the team can access any connected computer without having to change workstation terminals or go through complex connection procedures. They can instantly change between computers using simple hotkey commands on their keyboard or a simple push-button switch can be added in to make it even easier to change over. Of course there are system level controls to prevent unauthorised access as and when necessary.

A unique feature of the Draco tera KVM technology lies in its ability to bridge the gap between the show and broadcast workflows. Usually these are separate and transfer of live data between them can be complicated and not without limitations. The 240 to 60 Hz conversion incorporated into the Draco system offers enormous advantages to producers by combining those two workflows into a single workflow and simplifies data exchange.

Can you give some advice to any venue owners or operators considering hosting live esports events in the future?

Enlist and engage with the teams who will produce the event and production. It is only by mixing and interweaving resources, philosophy, experience and objectives that the disparate elements can be combined into a single successful result.

A sport aimed at the younger generation must engage with them and stay ahead of the innovation curve. Social media interaction is a prerequisite with incoming and outgoing streams needing to be managed imaginatively and with minimal overhead.

Looking further ahead, can you give some predictions in terms of how both the technology used and the esports market in general will evolve in both the short and medium term?

Technology will develop and evolve to handle this burgeoning sector. When you consider that the esports market is predicted to be worth over $1 billion dollars annually and observe some of the major names involved in hosting, sponsoring events and providing technology and services one can understand the desire and resourcefulness with which solutions will be sought to most requirements.

This sector is being run by some young, enthusiastic and highly imaginative individuals. Many of whom are not bound by traditional ways of hosting, capturing and broadcasting large events. They will come up with new concepts and ideas and apply new techniques to produce spectacular results.

In the short term I would look out for more creative use of VR and AR at events. In the longer term, perhaps greater remote participation and interaction – particularly under the current travel and social restrictions.

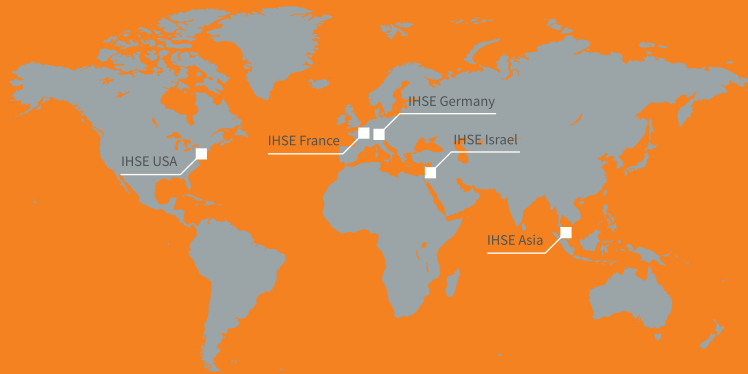But you really need to ask the guys at the sharp end that question!

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