Videohouse's new concept OB truck
uses Draco tera compact KVM matrix switch

The Customer

Euro Media Group (EMG) is one of the leading providers of creative and technical services to the broadcast industry, incorporating several large broadcast service providers across Europe. OB14 is the group's latest 10-camera outside broadcast truck and was recently completed by its Belgian division, *Videohouse*.

The Challenge

Rather than simply replicate previous designs, Videohouse's in-house system integrator, *ProjectBuilders*, reconsidered the design of this category of mobile production unit to create a radically new design incorporating many new features.

The goal of this new thinking was to create an optimum working environment in terms of ergonomic design as well as operational efficiency; and incorporate maximum flexibility in order to meet the varied requirements of outside broadcast operations. With a working lifetime of up to nine years before refurbishment, all systems

and equipment incorporated into the new build had to be future-proofed so that the truck would maintain a leading position and continue to operate effectively throughout the whole period.

The Solution

ProjectBuilders worked in conjunction with equipment supplier and system consultant, *Crosspoint*, to identify the key areas in which the truck could be streamlined. Chief amongst these was the addition of a separate internal corridor through the truck that serves to isolate the individual working areas, providing a much-improved environment. "Outside broadcast trucks are busy places with people coming and going all the time," explains Michiel Spaepen, project manager at ProjectBuilders. "By separating the individual sections it is not necessary for operators to pass through the main production area to reach other areas, which makes it quieter and is less disruptive for the production staff there."

The design team also considered ways to maximize the flexibility of the truck so that it would

be attractive to broadcasters of outdoor events of almost any size and type. Equipment racks were designed with sliding trays that are accessible from outside the vehicle. "This allows the truck to be configured with the necessary equipment for an individual task, allowing us to share equipment easily amongst the fleet and reduce the overall stock level of expensive devices," says Spaepen.

Another solution was to install an IHSE Draco tera compact KVM switch to give operators and engineering staff direct access to servers and production equipment from their individual workstation. Using hotkey selection, operators can easily switch between source devices, such as the DVE units, character generators, rasterizers, EVS servers and SloMo devices whenever they need to.

The Draco tera switch installed in OB14 provides a total of 32 ports and can be upgraded easily in the future by replacement with a 64 or 80 port unit. Flexport technology allows each port to be designated as either an input or output. It is currently configured to provide access from 12 individual servers and computers to 16 workstations enabling unrestricted device management and production facilities to operators. In addition, two extra pairs of KVM cross-repeaters are carried on board to enable remote connection of peripheral sources or displays up to 10 km away, using single-mode fiber.

The KVM system operates over a dedicated Cat 7 network. It includes USB 2.0 distribution capability so that external files and data can be loaded from flash sticks and hard drives. Touchscreens and other pointing devices can also be readily incorporated to ensure compatibility with future technology. Some older but regularly used servers employ VGA connections, rather than DVI. IHSE components accommodate both formats as well as a range of video resolutions and the modular nature of the system means that input and output units can be replaced to meet emerging standards, which again contributes to the future-proofing of the overall system.

Installation and configuration of the Draco tera was completed quickly and easily by ProjectBuilders with no external assistance, it was

simply a matter of installing the components and naming the ports, before it was ready to be used.
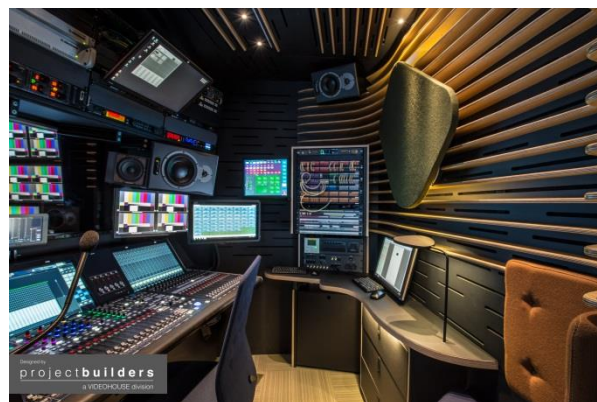
"The Draco tera compact switch was extremely simple to integrate in the OB truck and delivers video and data with no latency that can be changed instantly by the operators, allowing us to create a truly flexible and efficient workflow."

Michiel Spaepen, ProjectBuilders

Case Study

![ihse. Excellence in KVM and Video]

The Benefit

The new physical layout and equipment mounting techniques deployed in OB14 have resulted in a greatly improved operating environment and enhanced flexibility to tackle the widest range of outside broadcast tasks, with efficiency and cost-effectiveness. The new design reduces the amount of equipment within the truck; contributing to major space-saving and fuel-efficiency of the truck.

The KVM switch divorces operator workstations from source devices allowing greater individual access to systems. Spaepen: "It provides flexibility by allowing every operator to access any machine from their own workstation and enables the positions to be set up as they want. The Draco tera delivers instant switching of sources and do not cause any video or data latency; which is essential in live broadcast production."

> *"Operators aren't aware of the KVM switch; it simply operates in the background to deliver the instantaneous connection and switching of sources they demand in a live broadcast environment; exactly as it should be."*
>
> *Gert Vandoninck, Crosspoint*
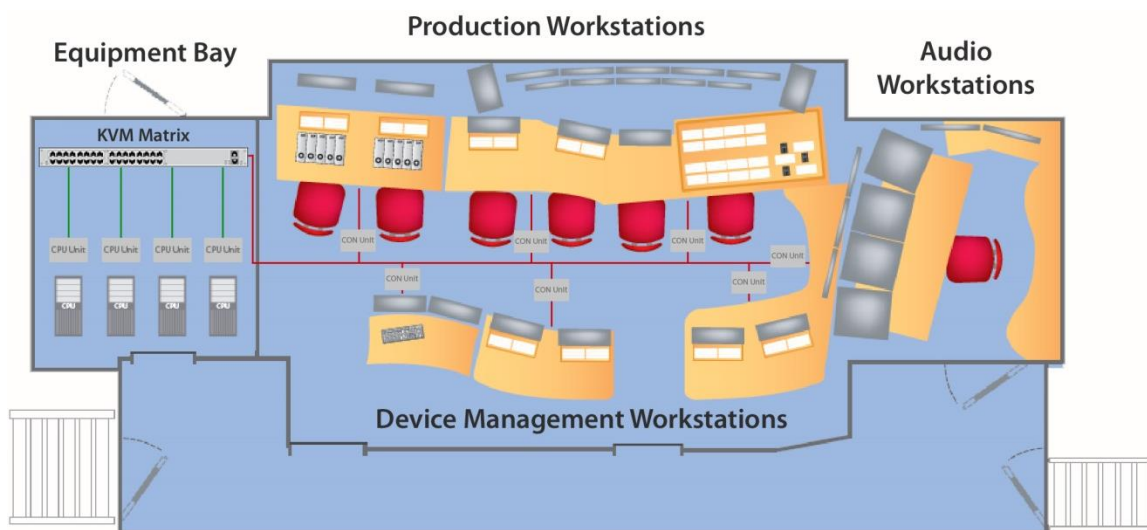
Functional Diagram: Outside Broadcast Truck OB14

KVM products in use:

- **Draco tera compact** matrix switch
- **Draco vario** extenders
- **Draco compact** extenders
- **Draco vario** Repeaters