



## Tokyo Broadcasting System Television

Draco KVM system provides new flexibility in playout and distribution workflows

### The Customer

Tokyo Broadcasting System Television, Inc. (TBS Television) is one of the major TV stations in Japan. Founded in 1951, and based in Tokyo, TBS Television has grown rapidly and has been leading the Japan News Network (JNN), providing-up-to-the minute news programming to an affiliation of 28 TV stations throughout Japan.

### The Challenge

For many years, staff at the Network Control Center, which manages the distribution of TBS Television channels, operated in a complex working environment. The facility included operator desks assigned to the many different transmission systems. In urgent situations, operational staff had to move quickly between desks depending on the transmission system needed. At the same time the Network Control Center had insufficient space to add new IP transmission receivers that are rapidly becoming more common in the broadcast environment.

Following extensive evaluation, TBS Television took the decision to upgrade its playout and distribution systems for the first time in 15 years. This included the introduction of a KVM matrix system to enhance the working environment by integrating multiple operations on individual desks with individual monitors, keyboards, and mice.

The new KVM system would positively aid operators' efficiency by providing them with stable transmission and seamless switching of high resolution video from multiple broadcast devices and control servers. The signals have



*Production working space*



*TBS distribution center with videowall*

to be distributed throughout the Network Control Center with no perceivable degradation or delay in image quality or limitation in access of equipment to users, whilst maintaining total security and system resilience.

## The Solution

The engineering teams at TBS Television evaluated different methods of providing better and more efficient working practices. Their solution was to implement two separate KVM matrix systems; one in the playout area and another in the distribution area of the broadcast operation.

Working with the TBS engineering teams, local IHSE system integrator ITOCHU Cable Systems Corp., supplied and installed two fully-redundant Draco tera KVM compact matrix switches in the playout area in 2017. The switches each include 64 ports in rack chassis. All servers and workstations are connected through appropriate Draco CPU and CON units, enabling users to instantly connect to any desired broadcast device located in the central equipment room.

After using and confirming the system performance on site for several months, a second system was installed in the distribution area of the Network Control Center in 2018. This is a larger system comprising a 160 port, IHSE Draco tera enterprise KVM switch that delivers the same features and functionality experienced by users in the playout area. The versatility and flexibility of the system is such that a variety of DVI and VGA signals from a mixture of Linux, Window OS version PCs video formats can be handled simultaneously.

The Draco tera system includes integral signal conversion where necessary so the integration team did not need to include additional format conversion equipment.

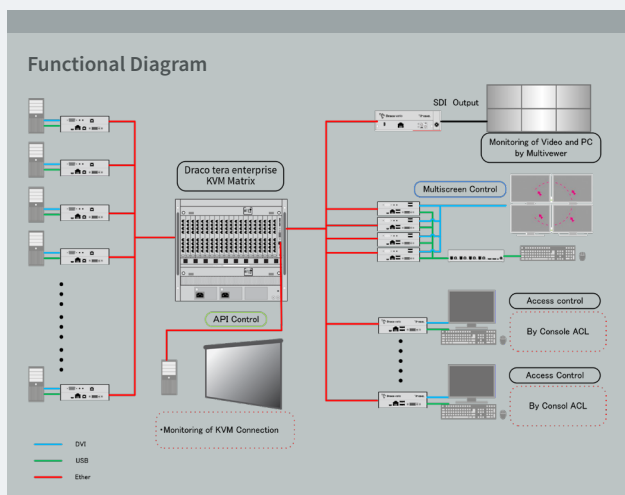
The system in the Network Control Center includes the Draco U-Switch to provide access to several servers using just one keyboard and mouse on each operator desk, which reduces desktop clutter confusion caused by multiple devices.

A specially developed user interface control program based on the IHSE API enables administrators to fully operate the system whilst visually monitoring all source CPU and workstation connections on a large videowall display. The system includes Draco vario 486 SDI extenders to provide simultaneous monitoring of SDI source content and DVI video on the videowall, making it possible to view all types of video content at the same time.



*The introduction and integration of the KVM switch by ITOCHU Cable Systems enabled more efficient operation of the Network Control Center through seamless switching of sources to operator desks. It allowed us to construct an integrated operation console with excellent scalability.*

**Takeshi Osawa and Arisu Goto, TBS Television**



## The Benefit

Operational staff at TBS Television receive delay-free, high resolution, video and audio transmissions without the inconvenience of bulky and noisy equipment in their working environment. They can instantly switch between sources as desired without moving, which simplifies their daily tasks and greatly enhances their efficiency.

### KVM products in use

- > Draco tera enterprise matrix switches
- > Draco vario extenders

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