

## Eiffage Energie

Draco tera KVM switches help in the maintenance of the LGV high-speed rail link

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### The Customer

Eiffage was chosen in 2011 by SNCF Réseau for the financing, design, construction and maintenance of the 3 billion Euro high-speed line linking Le Mans with Rennes; one of the largest rail projects funded by the European Commission and due for completion in May 2017.

This project adds a new high-speed train line of over 182 km to the existing line between Paris and Le Mans, putting Rennes within 1.5 hours travelling time of Paris.

### The Challenge

A major new control room was needed to enable train operators to manage and ensure total safety and reliability of the new line. As with all modern transportation systems, safety is a critical element, so the control room has to be operational at all times.

### The Solution

System integrator, Elecdan, was selected to equip the control room with an extensive KVM matrix switch system to enable OPERE controllers (a subsidiary of Eiffage created for the maintenance of the line) to manage rail operations and ensure the total reliability and safety of the new rail network. With its expertise in KVM installations, Elecdan designed and integrated a solution for the control room based on the IHSE Draco tera compact KVM matrix switch.

Within the control room, operators responsible for the safe running of the line are provided with information on



their local workstations, whilst a large videowall offers an overview of the complete rail network. In the crisis room, a video projector displays all the important information that is needed to manage potential incidents.

To achieve the required solution two 48-port tera KVM switches operate in semi-redundant configuration to connect a set of 25 pairs of computers, operating as main/back-up units, to 26 user workstations and a communal

projector as well as a large videowall. By splitting the switch system into separate networks and connecting each computer to both switches simultaneously the design ensures that should one switch fail, at least half of the user workstations will continue to access all the computers. In that condition half of the videowall would also operate continually.

Each operator workstation has six computer screens and two sets of keyboards and mice, connected through 4-port Draco U-Switches. Selection of content onto the videowall and projector is achieved by means of the tera switch's on-screen GUI.



### The Benefit

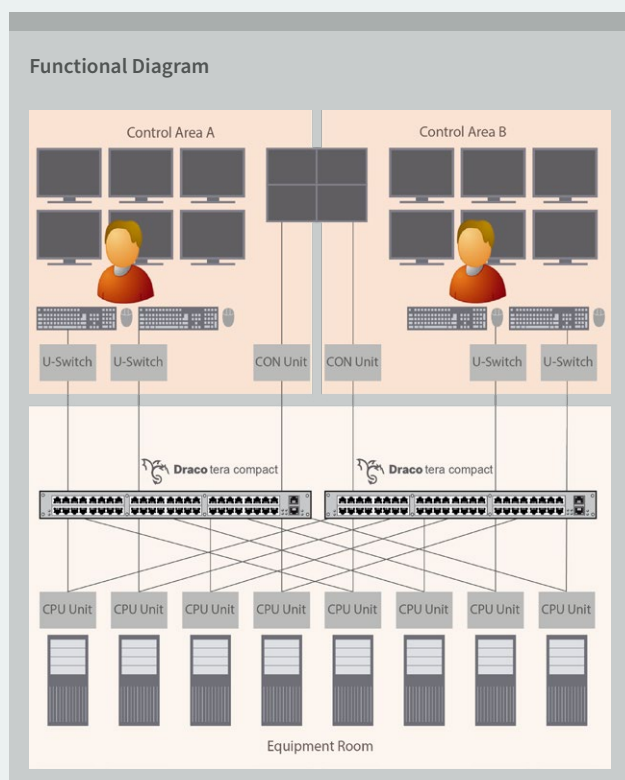
The installed system delivers the required functionality in providing information that is up-to-date at all times, and can be instantly selected and changed as desired by the operators through simple system commands.

Keyboard and mouse sharing between screens greatly reduces the number of computer devices on the desks and makes it simpler and quicker for operators to interact with separate computers, without having to choose between several keyboards and mice.



*The resulting installation offers a solution that is extremely simple for operators to use, whilst delivering the highest possible level of redundancy and backup in case of local component failure. The result is a system that best ensures continuous network monitoring and allows operators to manage a safe and reliable trainline. Thanks to the Elecdan team for the work accomplished.*

**Adrien Trouve, Eiffage Energie**



#### Installation

- > Customer: Eiffage Energie
- > Project planning and integration: Elecdan

#### KVM products in use

- > Draco tera compact matrix switches
- > Draco vario extenders
- > Draco U-Switch

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