DEPOT
CONTROL SYSTEMS

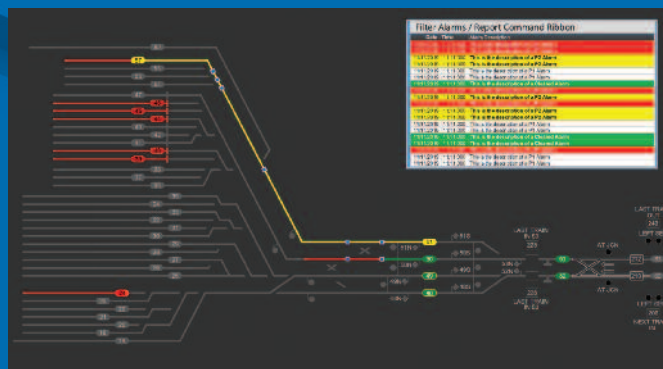## SELLA
CONTROLS
SAFE AND SECURE

Dynamic User Interface Features

Utilising SELLA CONTROLS **TRACKLINK© SCADA** toolset, the DCS solution provides a fully configurable user interface for depot operators.

Flexibility in design allows the user interface to mirror signalling HMI features. These features include:

- Common Password Protected User Profiles
- Simple Fully Configurable User Interface
- Full Event/Alarm Management Suite
- Decision Support Functions
- Train Position and Route Selection
- IEC Standard Cyber Security
- Full Diagnostic Suite
- Aligned to Network Rail Signalling Standard (NR/L2/SIG/11201)

Fully Integrated Safety PLC Interlocking

Using proven HIMatrix© COTS based safety PLC with industry recognised signalling equipment for train detection, SELLA CONTROLS can supply a fully integrated DCS solution. Either as a central interlocking or as a distributed application, the safety PLC offers a flexible solution for new and legacy installations. Features included with the PLC functionality are:

- SIL4 Certified Product
- Cost Effective Range of Modules
- Proven in use Signalling Applications
- Fully Configurable SILWorX© Programming Tool
- Function Block Logic
- Full Diagnostic Suite
- IEC Standard Cyber Security
- Embedded Frauscher SE Interface
- Network Rail Approved PLC Product (PADS)
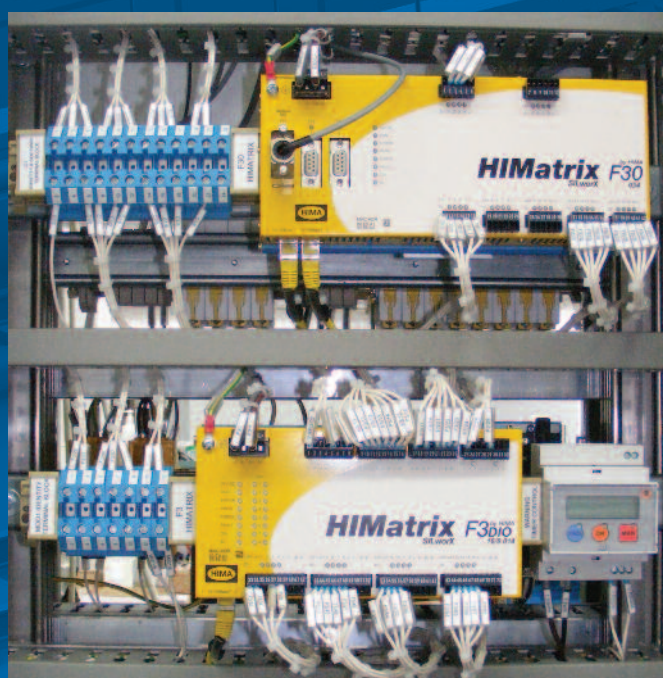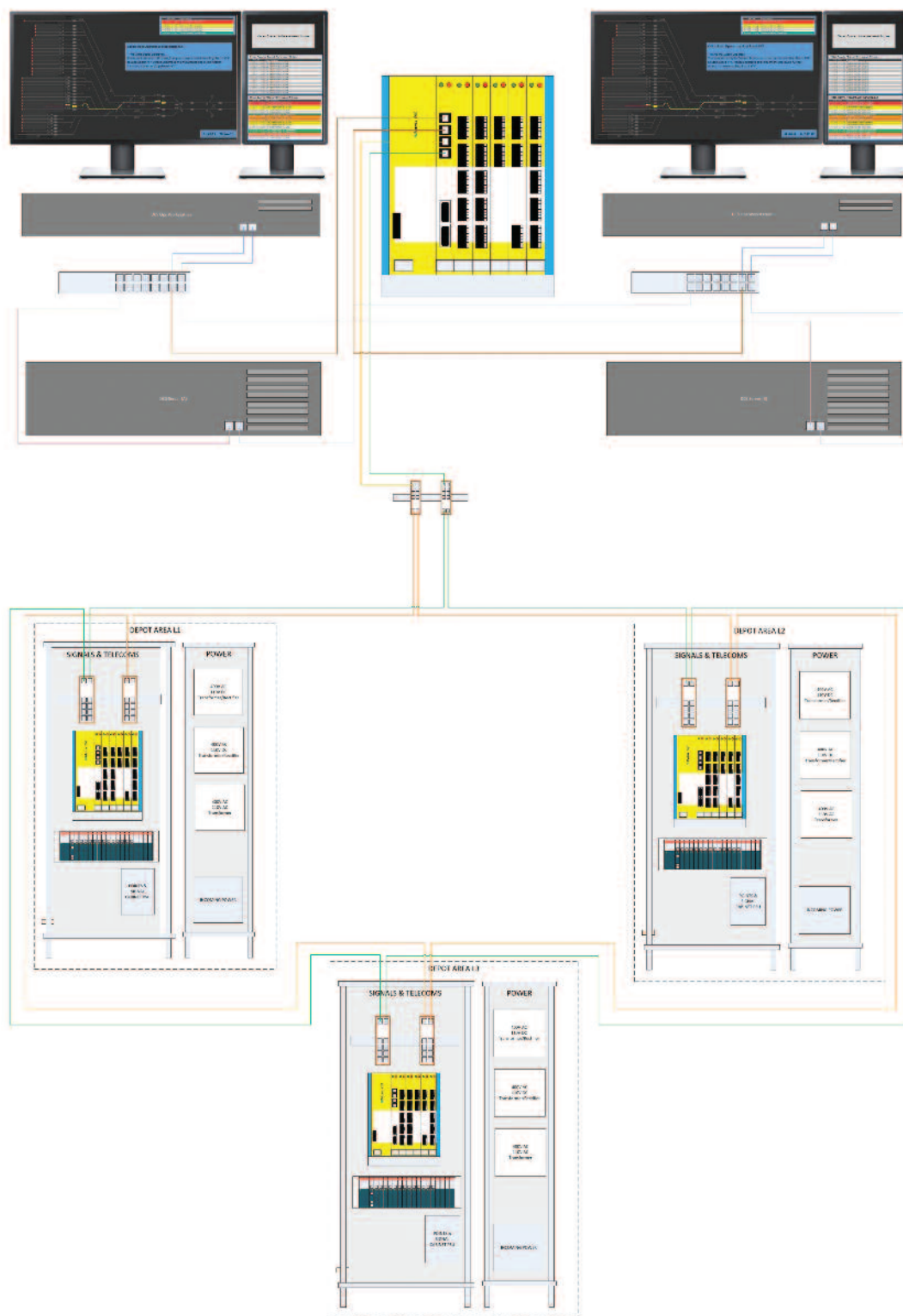
Train Detection & Positioning

Using safety PLC in partnership with industry recognised train detection equipment, the DCS can provide accurate train location and positioning. Specialist rail industry certified interfaces are available for connection to axle counter solutions and mainline signal interlocking. Many features include:

- SIL2 – SIL4 Certified Products
- Frauscher Axle Counter Systems
- Signalling Fringe Interfacing

Interfacing to these types of train detection equipment include Clear/Occupied Notification, Direction of Travel, Number of Axles and many other features.
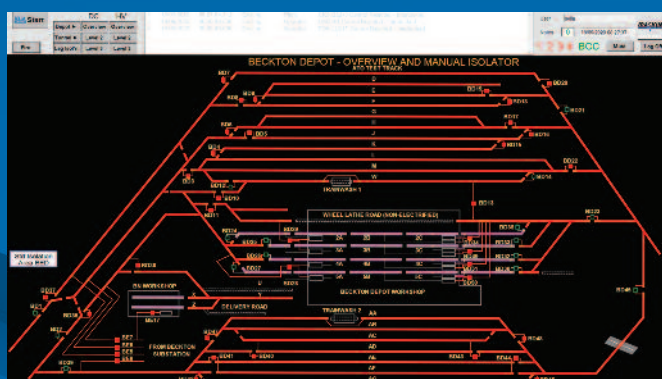

Integrated Depot Control

By utilising the features of TRACKLINK© SCADA and its integration capabilities, the DCS system can be expanded to provide a wider functionality. This can include integration with other operational systems in and around the depot providing a common point of control.

Multi user profile access features provide the opportunity to integrate depot control with power control and security systems. This would allow operators to access train occupation, energised tracks and visual (via CCTV) images of the depot. Typical systems that can be integrated are:

- Traction Power SCADA
- Depot CCTV
- Depot Access
- Depot Protection
- Business Support Tools (Scheduling)

SELLA CONTROLS, using its experience in safety systems control and working with signalling specialists, has developed a COTS based solution for the control of modern integrated depots (DCS). Its solution architecture is based on a modern design using industry standard practices and proven control and safety products.

Depot Control & Integration

TRACKLINK© SCADA and its toolset, have been developed on a COTS software platform for integration with modern COTS Safety PLC technologies. SELLA CONTROLS are able to supply safety critical and non safety critical applications up to and including SIL4 for depot control.

Traditional relay based interlocking solutions are centralised and require a large installation foot print, increasing the overall cost of a renewal. The use of industry proven safety PLC technologies as a solution for railway control applications is seen as the next logical step.

Using intelligent safety PLC to provide the depot interlocking function delivers a more cost effective approach. A PLC based interlocking reduces the physical size of the installation.

In addition to this, flexibility offered by a distributed architecture reduces cabling costs as 'Box On Post' (BOP) style installations can be used.

Using a central interlocking PLC and remote intelligent object controller PLC provide railway administrations with a compact and cost effective solution for integration into there existing rail infrastructure.

User Functionality

The **TRACKLINK© SCADA** toolset provides a modern integrated user interface for the DCS solution. Its flexible application ensures depot operators are provided with a simple control HMI. The user interface provides an overall depot layout that is fully configurable to show train movement, track position, point control and signal status. Dynamic symbols will be configured to multiple status conditions providing operators with immediate and prioritised data to improve decision making.

Route planning features provide operators with tools that allow the despatch of train service to be accelerated. This is critical prior to and during peak operational hours to ensure trains can depart from the depot at their allocated slot.
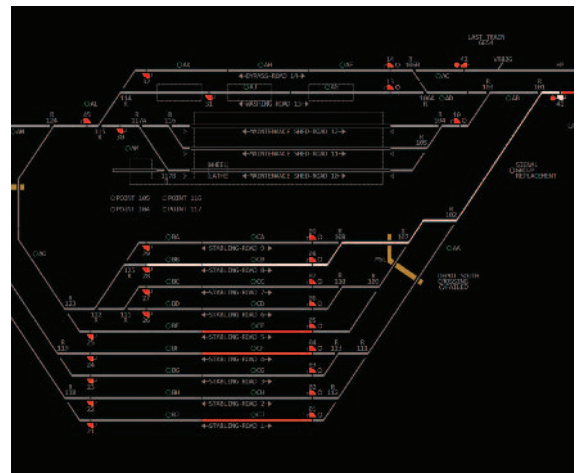
Asset Performance

Depot assets are centrally monitored with all operation and actions logged within the event and alarm list. Historical data is archived for future reference to provide performance data and diagnostic features for depot maintainers.

In the event of an asset failure, depot operators are alerted immediately as to the location. This accelerates the mobilisation of maintainers to the point of failure, reducing the time it takes to return a depot to service. Diverse networks provide the system with a level of redundancy that minimises disruption to the depot.

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