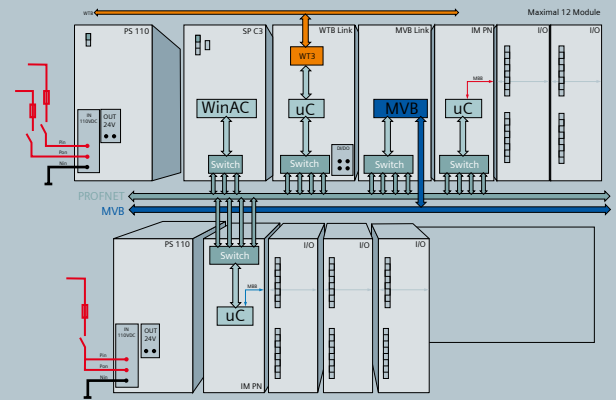
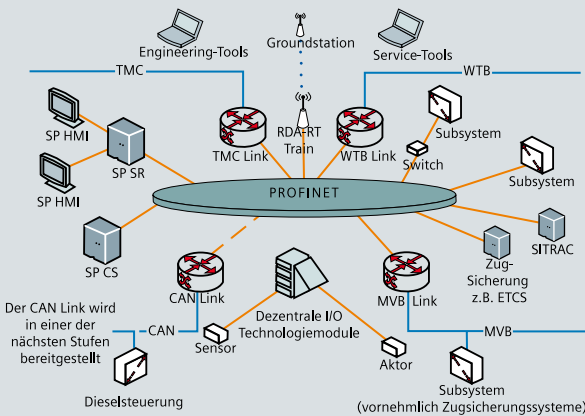


## Our solution:

Sibas PN is based on the SIMATIC core components of SIMATIC Totally Integrated Automation. Sibas PN offers the ideal tools for automation functions and for every project phase, to make it possible to fully exploit the potential of Engineering Workflow.

- Fewer interfaces due to the integrated engineering environment for logic, control functions and HMI (human-machine interface).
- Quick conversion of the process design in the guidance and control structure by engineering with standardised libraries and subsystem interfaces.
- Reduction of design and implementation times by structured, process-oriented engineering methodology.
- Less input costs and no inconsistencies due to the shared database.
- Less labour input due to comfortable project planning instead of programming.
- Quicker induction and familiarising for project and maintenance staff through intuitive operation and use of standard SIMATIC languages.
- Increased equipment availability due to efficient system diagnostics and backup solutions.



In Sibas PN a system concept for vehicle control has been developed, in which the currently used MVB will be replaced by the PROFINET system with specified features as vehicle bus. To make the step-by-step migration of subsystems possible, an interface to the MVB will continue to exist.

Libraries with a high degree of standardisation make efficient reuse of technological functions in vehicle control possible. The central control device, the signal former subassembly and the communication subassembly comply with the expanded environmental requirements for railway applications.

# Sibas PN

The trendsetting concept for vehicle control systems

Electronic Design and Manufacturing Services

**SIEMENS**

## Sibas PN structural design technology

Sibas PN is based on modular structural design technology comparable to SIMATIC S7. In addition to the control (SP CS) relevant signal former modules for binary and analogue input and output signals are also available.

The linking of train bus WTB and MVB to the vehicle bus PROFINET is established via gateways (WTB link or MVB link). Special functions specific to railways are performed on the basis of TM technology modules (primary current monitoring and interference current monitoring). All modules are fixed onto a profile rail. Several modules form a station, which can be supplied with power from one or more power supply modules.

## PROFINET as vehicle bus

PROFINET is not a communication network such as the MVB for example, where all participating devices/communications participants have to access a shared medium used by all, but PROFINET always have active elements between the communication participants. These active elements are called switches. The purpose of the switches is to organise the traffic of data in the network and to strengthen the signals.

For this purpose information in the data telegrams are evaluated and then forwarded to a specific address.

## Project planning with Sibas PN

The SIMATIC engineering tool is available for the creation of application programs. Standardised libraries on the basis of

technological vehicle functions are available for project planning.

Access to the process image can take place via direct as well as symbolic addressing.

## Modular functions library with high degree of standardisation

The Sibas PN libraries make a reduction and standardisation of interfaces and technological functions of vehicle controls for all TS rolling-stock areas possible. This simplifies the engineering procedures and commissioning expenses. Application-specific libraries are possible, but it can be kept small because of the powerful functions libraries.

