



A Deutsche Bahn Train,  
Clean and Ready to Go



Customer Success Story

## Deutsche Bahn Berlin, Germany



A GENESIS32 Washer Screen

*"ICONICS was selected for this job for their superior 3D graphics, ease of use and close relationship with Phoenix Contact."*

**Marco Heyd**  
CEO, S.A.H. Heyd Group

### About Deutsche Bahn

Deutsche Bahn AG railways carry more than 1.8 billion passengers per year throughout Germany and neighboring countries. Deutsche Bahn is also responsible for moving 78 billion tons of freight annually. All service and rail stations are maintained by DB Stations & Services. DN Netz provides the track infrastructure. The company is owned by the German government and is one of Europe's largest transportation providers.

### ICONICS Software Deployed

GENESIS32™ Enterprise edition is deployed for the train washing at the most state-of-the-art train washing applications in the world. Alarms are handled by the ICONICS AlarmWorX™32 application. Users can acknowledge alarms from anywhere in the systems.

TrendWorX™32 is used for all trending and can give the users up-to-date information, which includes both real-time and historical data. GraphWorX™32, the graphical design and runtime environment for GENESIS32, plays an important role in this application. From GraphWorX32, all monitoring and control for the train washing is handled with rich 3D graphics.

### Key Features

The train washing system is revolutionary in the fact that one washing system can accommodate any type and shape of train in the world. A new 3D brush allows for cleaning any shape of train, including the modern bullet train. The GENESIS32 system provides a "learning mode" to allow the system to make the necessary brush and sprayer adjustments. Train specifications are loaded into the GENESIS32 system and operators can use the animation feature in GraphWorX32 to trace the path the train will take through the washer.

The operator can adjust the brushes and sprayers from GraphWorX32 and have this information stored for future use. When the train returns to the washer, the parameters captured during the learning mode are downloaded to the PLCs to properly adjust the spray-

ers and brushes. This mode ensures every part of the train is washed.

### Project Summary

S.A.H. Heyd Group was selected for this application due to their industry technology leadership and the complexity of the application. All trains are electric power and, under most circumstances, water and electricity do not mix. Since all trains need to enter and exit the washer under their own power, S.A.H. had to treat the water so it would not be conductive. The GENESIS32 system is used to control the water treatment for the washer. All water used in the washing application has the minerals

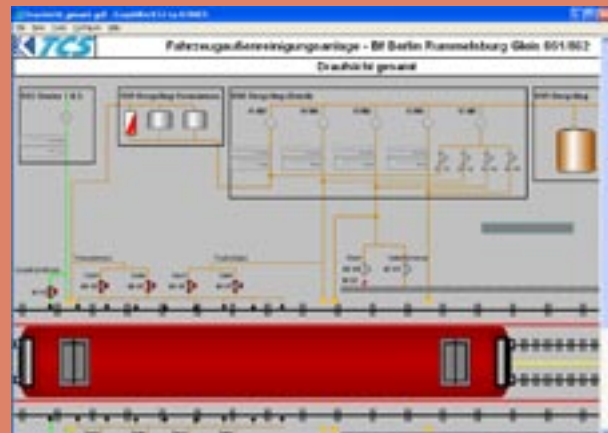
ware, is used in this application. The Phoenix Interbus OPC server provides the OPC connectivity. All automation on the washing side is handled by TCS, a specialty company for washing applications. GENESIS32 is running on Windows 2000 and all alarm trending is done via Microsoft SQL Server.

### Conclusion

The GENESIS32 software allows for rich 3D graphics and has the OPC connectivity needed for this very robust and “clean” application.



*Train Wash Operator Control Area*



*Another GENESIS32 Washer Control Screen at Deutsche Bahn*

removed, making it non-conductive and safe to be used with the electric trains. This revolutionary process allows for trains to be washed without being taken offline. The process saves time and money and keeps the trains in service.

Another major feature of the learning mode is the ability to sync the left side washing with the right side. It is important to make sure the washing is done evenly. Once the operator has made the necessary changes in learning mode, he can have GENESIS32 perform an automatic sync of the left side with the right.

The GENESIS32 system monitors over 1,500 tags. Phoenix Contact PcWorX, based on ICONICS soft-

### Product Highlight



**GENESIS32** is ICONICS' Web-enabled, OPC-integrated HMI/SCADA suite that takes full advantage of multiple Microsoft operating systems.