

WEBfactory® Success Story

# Mercedes-Benz Museum



Flexible process visualisation with OPC connection

## See things in the right light

On May 19th 2006 the new Mercedes – Benz museum was opened in Stuttgart Bad Cannstatt. With an expositional area of 16.500 m<sup>2</sup> distributed over nine levels, it offers the space for 1.500 exhibits in total. The elaborate architecture of the building, admired by many is not a purpose in itself; it shows the presented vehicles as well as their history in the centre. In addition to the stylish expositional areas the right lighting plays an important role. Art and technology work hand in hand here: Lighting concepts developed by artists, implemented using the most modern control technology, present the exhibits in the right light.

Many companies have collaborated in the construction of the Mercedes Benz Museum. One of them is the Göppingen based company Speidel GmbH & Co. KG. As service provider for building equipment the company was entrusted among others with the control of the lighting. With over 18.000 in the whole museum building, this is no easy task.

### Well lit

A static lighting concept had to be developed, avoiding that sophisticated lighting effect distract the visitor's attention from the exhibited vehicles. In more than half of the expositional areas there is no natural light, in some others the naturally occurring lighting had to be integrated into the lighting concept.

For the floodlights to touch the right spot with the exactly right amount of brightness, they were connected via LON bus with the superior control system.

The actual "lighting design" is based on ideas of artists, whereas the Göppingen based company implemented them in the software with the process control system.

The stored lighting concept can be monitored by the company technician on his control station at his work place in Facility-Management. Here he can also see possible faults and can intervene accordingly. As visualisation system Speidel relies on the software WEBfactory. In general the individual lighting units are activated or deactivated based on timers. Should it be necessary for certain reasons, e.g. due to a special event, for lamps to burn longer than usual, the system can be switched to event mode.

The company technician can manually activate and deactivate individual lighting circuits. In order to avoid losing the elaborate programmed lighting concepts, a corresponding assignment of rights regulates the access of individual users. While observation is allowed for all users, e.g. only certain persons can change the lighting programming.

### Flexible process visualisation

Process control systems have changed a lot in the last years. Inflexible visualisation tables are long since forgotten. Today flexible solutions are in demand, with the possibility of extension and overall usage. In case of the visualisation systems developed by WEBfactory for example, a PC with a simple browser replaces the control centre. Along with the usual requirements for a visualisation system, this one convinces through its open architecture and the consequent usage of WebStandards. In addition, a web based visualisation also offers whole new possibilities. In case of need it can be used to set-up a system so that the user can visualise the current situation of the plant using a simple PC with a browser, thousands of miles away, just as if the user were on site. All operating and error messages as well as production data are stored in the basic database. Using the web server functionality the data is available on the whole network.

„We did not decide for WEBfactory only when we saw the lighting control in the museum “ Wolfgang Zeller, project manager for Speidel, declares. “This was a decision of principle. As soon as we decided to take over the usage of LON-Bus in our range of services, we needed according process visualisation software.

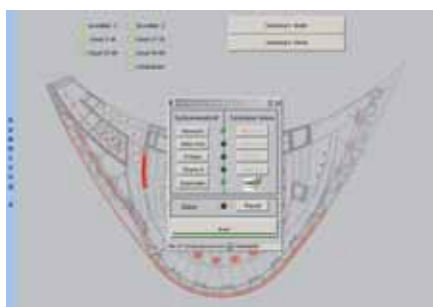
And in order not to have to learn a new system for each bus, we needed one which was flexible and worked for all systems which we install. Thanks to its OPC interfaces WEBfactory was the ideal solution.” The visualisation software is not sensitive to the type of bus connected to the OPC server.



### Keeping small projects affordable

Just like many other users Speidel was won over by the license model, “With other systems many small visualisation problems are not even affordable”, according to Zeller. Along with the financial benefit and the OPC based flexibility, the software also offers other benefits: According to the requirements of the application, additional modules can be bought; the modular structure allows for small as well as large solutions to be realised within an optimal price / performance relation. In the described application the system does not use all of its features. One of the additional modules is InetPro, providing among others a secure communication via internet. „We use InetPro because it is easier to handle than DCOM” Wolfgang Zeller states „In addition, it was a requirement that a remote access to the system was possible with up to 20 clients. This aspect is also easily solved by the additional modules.”

In the current execution the visualisation system only runs locally in the museum building. It is however relatively easy to grant access for monitoring purposes per internet, upon request. The system developers can then access the main computer via internet.



“In theory I could switch off the light for our customer remotely” Zeller laughs. “But seriously: For service purposes this is an ideal solution. Should there be a problem, we could remove it remotely in most cases, without the need for travel on location. This saves time as well as money and therefore the interests of the parties.” In especially critical applications the Redundancy Module provides for safety switching more individual systems in parallel for monitoring. With Messenger Pro the distribution of the operating and error messages can be managed in countless lists of calls, contingency plans and alarm tables. For the rapid set-up of secure maintenance plans for technical installations the maintenance module is ideal. In international projects, a language module allows for access in your own language, regardless of where you are, at any time. The mobile edition finally brings process information from all over the world to a mobile device, e.g. a PDA. This would make it possible to adapt the visualisation application in the museum so that the company technician is able to monitor the whole building not only from his work place, but from any place in the museum and make sure, that everything is presented in the right light.