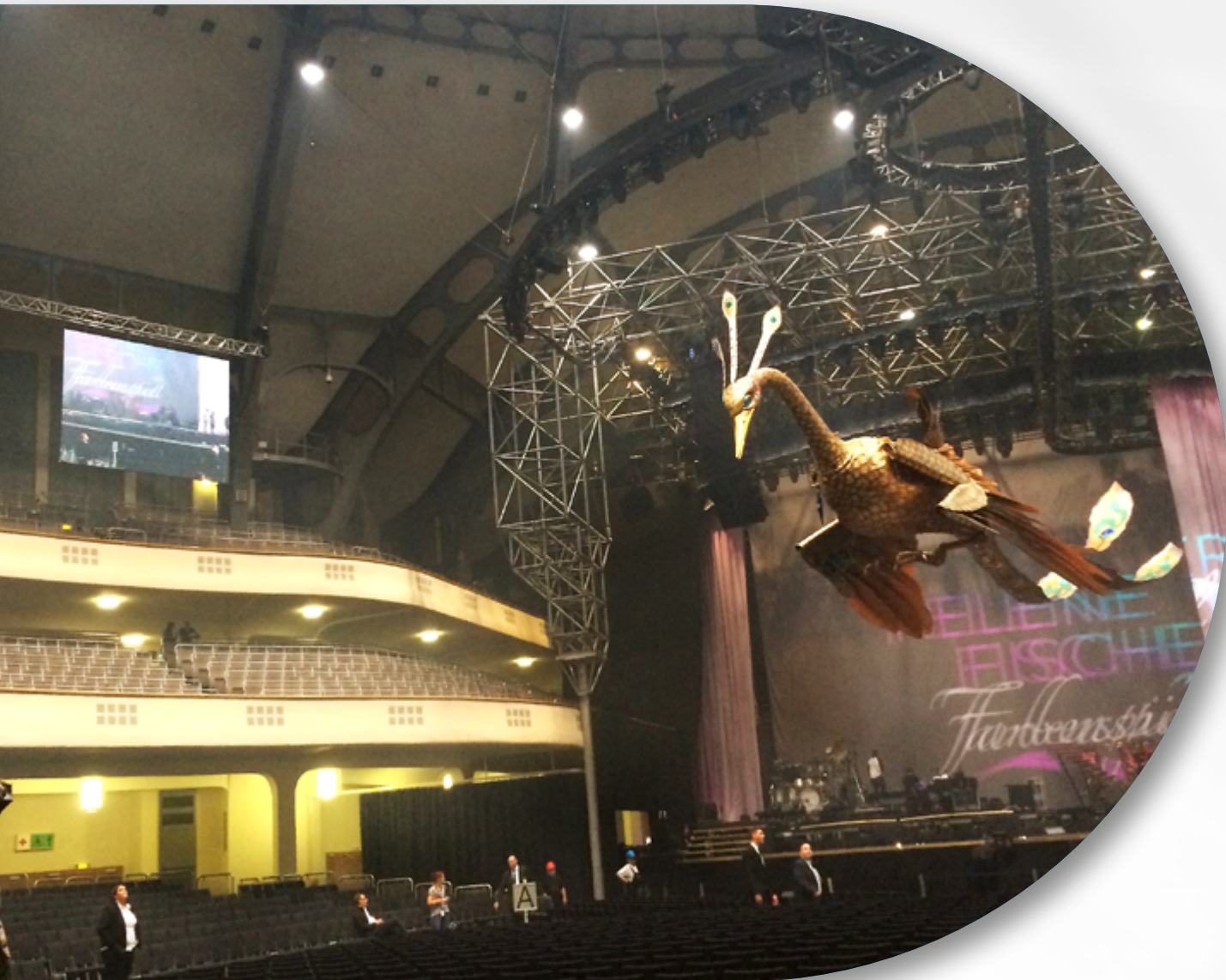




**SCHILDKNECHT**  
SMART DATA COMMUNICATION



## STAGE TECHNOLOGY AT HELENE FISCHER

Safe "flight" of Helene Fischer by DATAEAGLE radio module

## THE BIRD FLIES

The bird is controlled by a **DATAEAGLE 3000** (Wireless PROFIBUS), on it sits Helene Fischer (Germany Singer) while performing at her concerts and flying above the audience.

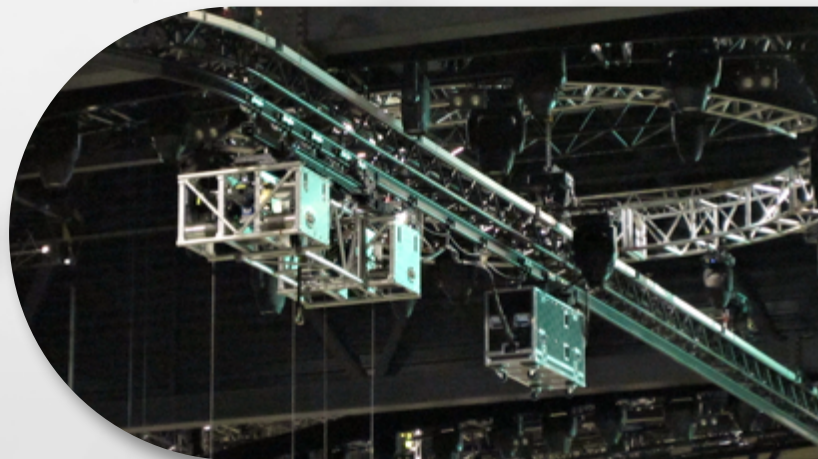


1

The automation technology including the flight of the bird is controlled from backstage.

2

The bird "flies" along a winding guide rail construction. The control unit is directly on board including the DATAEAGLE Slave for the data transmission.

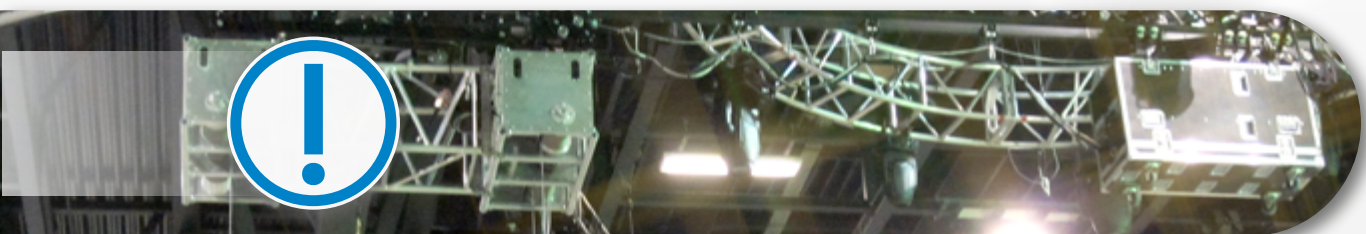






## APPLICATION

Attractive effects of sound, lighting and motion optimally coordinated with each other are the prerequisite for successful show events of any kind. This makes particular challenges to stage technology especially with regard to security and the audience because of moving or even lifting stage elements frequently guided into pre-defined rails above the heads of the audience. An impressive example for this is the flight of the bird in the Helene Fischer Show "Farbenspiel" in which Helene Fischer sitting on her large bird while singing flies over the audience in up to 15 metres and finally lands on a central stage in the middle of the event hall. A prerequisite for such performances is a powerful stage technology tailored to particular safety requirements with regard to control and communication. In this process, radio technology (radio system of the **DATAEAGLE®** series) as part of a communication network such as PROFIBUS is also applied, substantiating the high performance and reliability of these devices and their importance for modern stage technology.



## CHALLENGE

The challenge of this application to stage technology is the absolute security of people in the interplay with technology. In the present case, this concerns the safe flight of the bird of Helene Fischer and its precise landing on the small platform midst the audience. Due to the 80 metres long and winding guide rails no trailing cable connection to the bird was possible here. Power supply was therefore via an additional bus bar, at which power electronics was ridden along as well. On the other hand, control commands to this moved system had to be transmitted wirelessly, i.e. radio, a particular challenge in view of the operational safety required.



## SOLUTION

The solution was provided by a PROFIBUS fieldbus system in which the power electronics (Füllung & Partner, 5 Highline units) was ridden along as slaves at the bar while **wireless PROFIBUS communication** from the stationary highline master to the moving parts is carried out by the **DATAEAGLE 3712** radio module. In parallel, there is an independent system for emergency stop. Radio transmission utilizes a **2.4 GHz Bluetooth** connection which thanks to its robustness also in stage technology has almost replaced the WLAN technology formerly used. The **DATAEAGLE 3712** data radio system filtering out reliably possible short-term radio interferences thanks to its special and **patented functional blocks** and providing for a stable radio connection, represents a considerable additional added value with regard to operational safety and availability.



## RESULT

The successfully implemented partnership in this project between **SWL, Füllung & Partner** and the radio specialist **Schildknecht AG** was the basis for many undisturbed performances of "Farbenspiel" and also other events with also sophisticated stage technology. In terms of value, DATAEAGLE forms just a small part of automation technology of such systems, but with regard to functional reliability and availability this radio module represents a decisive component. Steffen Boschert, owner of the project-leading company **SWL** is summarizing his experience:

*„We were highly satisfied with the quality and reliability of the radio systems applied and particularly with the support provided by the company Schildknecht. The radio modules applied helped us to achieve the required security standards according to DIN 56950-1.“*

1) Entertainment technology - Machinery installations - Part 1: Safety requirements and inspections

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