



**project: syntropy (Germany / KSA / Sweden / Singapore)**  
creates dvLED- / projection-based visual technologies and solutions for professional simulation and training environments, immersive XR environments, XR-CAVES, media based attractions and much more.

## **Project**

### **EUROFIGHTER PSTS Full Mission Simulators**

### **MOB Laage (German Air Force)**

**Customer**  
Luftwaffe (German Air Force) at Main Operating Base Laage, on behalf of Carl Zeiss Jena GmbH.



**Project**  
Construction and integration of four 360° 6m full dome projection systems for four EUROFIGHTER Full Mission Simulators (FMS) at the Main Operating Base Laage, where the Tactical Air Force Wing is stationed.

All Visual Display Systems are equipped by ZEISS with 18 high resolution VELVET-LED projectors and comprise VIOSO ProjectionTools autocalibration.

**Project Details**  
After our successful co-operation with ZEISS comprising the realisation of visual display system upgrades for eight Eurofighter-FMS- and CT-simulators, one Transall FMS collimated VDS-upgrade and three Tornado-Full Mission Simulators – including several upgrades to LED-projectors later on – we have continued our partnership in the project Pilot Synthetic Training System PSTS for the Main Operating Base (MOB) in Laage. Main contractor is Airbus Defence and Space GmbH in Manching.

During the course of the contract existing FMS and CT Simulators in Laage will be upgraded and two additional FMS of the latest standard will be installed. This will enable the German Air Force to perform four-ship training at a single location and multi-ship training at distributed networked locations.

Due to our new design of the Visual Display Systems, the building can accommodate the four FMS within the existing simulator halls without major infrastructure adaptations.



Leading Provider of Next Generation Visual Display Systems

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**project:syntropy**



**Our work in the project PSTS comprises the following:**

- complete Visual Display System planning
- production and installation of the 6m large fulldomes
- production and installation of all support and maintenance structures for fulldome, cockpit, projectors
- system integration of the 18 projectors each incl. warp&blend hardware
- integration of Warp & Blend Hardware as well as
- installation and automatisisation of the domeprojection. com ProjectionTools autocalibration incl. color-calibration.

Special design challenges were a) the restricted space inside the only 6m in diameter 360° fulldome concerning the large number of projector channels and b) the complex requirements for fast and easy maintenance to avoid unnecessary downtime.

Virtual flights in the PSTS FMS simulators allow pilots to freely use German airspace and even conduct low-altitude flights over areas where this would not be possible in reality. In addition, the simulated exercises provide effective protection from the prying eyes of foreign military observers.



**project: syntropy's visual display solutions for**

- **FMS FULL-MISSION-SIMULATORS**
- **FFS FULL-FLIGHT-SIMULATORS (EASA Level D)**
- **CT COCKPIT SIMULATORS**
- **HELICOPTER FLIGHT SIMULATORS**
- **FNPT / FTD TRAINING SIMULATORS**
- **COMBAT SIMULATION**
- **JFST ACTION TRAINERS**
- **JTAC TRAINERS**
- **ATM TOWER SIMULATORS**
- **DRIVING SIMULATORS**
- **SHIPS BRIDGE SIMULATORS**
- **INDUSTRIAL SIMULATORS**
- **RESEARCH SIMULATORS**

**full-service for S&T visual display solutions**

project: syntropy offers turnkey solutions and full-service throughout your entire project:

- **CONSULTING**
- **CONCEPT AND DESIGN**
- **APPLICATION DEVELOPMENT**
- **CONSTRUCTION, MANUFACTURING, INSTALLATION**
- **ADVANCED SOLUTIONS FOR NVG STIMULATION**
- **FULLDOME SYSTEMS**
- **tailor-made dvLED-/Projection-based VISUAL DISPLAY SYSTEMS**
- **AFTER SALES SERVICES**
  - training
  - maintenance and support
  - tailored service-level-agreements (SLA)
  - spareparts supply

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