



**project: syntropy (Germany / KSA / Sweden / Singapore)**

creates AV technologies and solutions for professional simulation- and training environments, XR-CAVEs, XR-Spaces, interactive immersive media based attractions, xD dome theatres and planetariums. 25 years of experience and over 250 projects world-wide have resulted in highly scalable turnkey media based attractions.

**Project**

**Media Based Attractions for German Pavilion BIONIS, EXPO 2005, Aichi/Japan**

**Customer**

Federal Ministry of Education and Research, Germany, on behalf of ZIERER Karussell- und Spezialmaschinenbau GmbH.

**Project**

**Complete media technology** and **show-control** for the Experience Ride and Experience Lab in the German Pavilion at the EXPO 2005 in Aichi/Japan (25/03/05 – 25/09/05). **Dark Ride** and **Motion-base dome projection**. Development of **photo stations** and many more **multimedia shows**.

**The German Pavilion BIONIS**

In summer 2004 project: syntropy was entrusted to plan and set up media installations and special projections for the Experience Ride, Experience Drops and the Experience Lab of the German Pavilion BIONIS at EXPO 2005 (March 25th until September 25th) in Aichi/Japan.

Fortunately we could draw from our expertise from a similar project: the Dark Ride CHEMIDROM of the pavilion MAN at EXPO 2000, Hannover/Germany. We met the tight production schedule of only nine month and convinced our client to assign additional tasks to us which had been the development and implementation of a digital capture photography system for the ride; the design of multi-media applications and post production of several videos to be shown in the Experience Lab. The German Pavilion BIONIS, being one of the three most visited pavilions was awarded a gold medal for its performance.

**Project Workflow**

In autumn 2004 the planning phase resulted in a successful test installation of the Experience Ride. The Ride was demonstrated and tested on a shop floor in Berlin. Additional media and control technology was then installed in the ten Experience Drops. By December 2004 all media technology was assembled, configured and shipped in containers to



Leading Provider of Next Generation Media Based Attraction

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Japan. Beginning in February 2005 we installed the media technology for the Experience Ride and the Experience Lab. Subsequent to that we implemented and programmed the show control for the Experience Ride. During the six months opening time of the EXPO our employees were controlling operations and maintaining all installations.

When the EXPO closed its doors we took part in the dismantling of the Experience Ride and the Experience Lab. It was subsequently rebuilt and newly themed as "Sturmflutenwelt Buesum" at the North Sea.

### Highlights

One of the main attractions of the Experience Ride was the unique combination of a Motion-System and a Dome Projection System.

We used our own custom-built solution to realize the edge-blending and distortion of the multi-channel projection, which includes automatic calibration as a combination of a motorized camera and software. The system was also used to calibrate the multi-channel projections along the tunnels of the Dark Ride.

### Work

- Planning and technical management of projection and media technology as well as of the control technology of the Experience Ride and the Experience Drops (wagons)
- Planning and production of complex projections along the dark ride
- Geometric correction of the dome projection and seamless multi-channel projection on the curved screens of the dome
- Programming of the show-control
- Post production and compositing of videos
- Development of interactive applications
- Media Mastering
- Development, production and installation of a digital capture photography-system for the ride
- Assembly and dismantling of complete media and control technology
- Control operation and maintenance of all our installations in Japan

### Turnkey Display Solutions for Simulation, Training, Immersive XR-Spaces, XR-CAVES, Media Based Attractions

project: syntropy offers turnkey projection / dvLED-based display solutions, tailor-made AV systems and full-service throughout the entire project:

- PROJECTION- OR dvLED-BASED SYSTEMS
  - DEVELOPMENT
  - ENGINEERING
  - CONSTRUCTION AND INSTALLATION
  - AFTER SALES SERVICE
    - Training
    - Maintenance and Support
    - tailored Service-Level-Agreements (SLA)
    - Spare Parts Supply
- VISUAL SOLUTIONS FOR SIMULATION & TRAINING
  - FMS FULL-MISSION-SIMULATORS - FFS FULL-FLIGHT-SIMULATORS - CT COCKPIT SIMULATORS - HELICOPTER SIMULATORS - COMBAT SIMULATION - JFST ACTION TRAINERS - JTAC TRAINERS - ATM TOWER SIMULATORS - DRIVING SIMULATORS - SHIPS BRIDGE SIMULATORS - INDUSTRIAL SIMULATORS - RESEARCH SIMULATORS
- MEDIA BASED ATTRACTIONS
  - XD FLYING THEATRES - XD 360° & 720° ATTRACTION DOMES, CINEMAS & GLOBES - INTERACTIVE VISITOR ATTRACTIONS - MOTION THEATRES - DARK RIDES - MEDIA FACADES - IMMERSIVE TUNNELS & IMMERSIVE ENVIRONMENTS - PLANETARIUMS - PROJECTION MAPPING
- DIGITAL TWIN XR-SPACES (e.g. UDT Urban Digital Twins)
- XR-CAVE - XR VOLUMES
- SYNTOUCH MULTIUSER RADAR TOUCH
- MIXED REALITY ENVIRONMENTS & TRACKING TECHNOLOGY DEVELOPMENT

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