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F1 track experience thrills visitors

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**AV Awards 2010
Winners' round-up**

Racing experience comes alive in Germany

AV Awards Grand Prix winner D J Willrich has been busy working on a new visitor attraction centre by Germany's Nürburgring racing circuits. **Clive Couldwell** delves into the new experience.



Immersed in a projection cave and seated on a motion base, visitors get a thrilling ride on the crazed Nürbus Eifel Tour.

Nürburgring is a magnet for motorsport enthusiasts around the world. Now the area near to its two tracks has become an impressive indoor theme park designed to enhance the visitor experience by creating a journey through motorsport.

The *ring°werk* ('ring' factory) aims to convey the feeling and myth of a race track with a great history, as well as provide visitors with a flavour of what it's like to go racing.

Nürburgring wanted to reach beyond its core visitor base of die-hard motorsport fans to create an interactive experience that would extend the duration of the average track visit. The park therefore boasts a number of themed areas which include an interactive driving experience, 4D cinema, fully immersive revolving theatre and rollercoaster.

One of the project's biggest challenges was the

late delivery of the building work which compressed a 33-week programme into 18 weeks and meant working on what was a building site. In this 150,000m² park, there were many contractors working together and in parallel, making it a real challenge to be ready in time for the opening, timed to coincide with a DTM German Touring car race on the Nürburgring track.

Working on the entire attraction's av and using its own specialist team, multimedia integrator DJ Willrich (DJW) crafted a number of complex and innovative environments. A great many av elements and contractor skills had to be coordinated to deliver a seamless solution for the client – Nürburgring Indoor Attraction.

Show control

Five control rooms with four control systems monitor

the site's themed areas. One master, portable 'touch' control runs on a tablet PC and can be used anywhere on site. It powers up each of the attractions at the start of the day and powers them down at night. The show control system also communicates with the emergency alarm system, shutting down the av when visitors need to leave the building.

The most complex attraction on site is *Grüne Hölle* ('Green Hell'). This tells the story of Nürburgring's creation and development, along with that of the motor car. Originally, Nürburgring fulfilled a dual role – as Germany's main motor racing circuit and as a location for testing vehicles.

The audience sits in the centre of the theatre on a 10m in diameter turntable surrounded by a scenic set that revolves around it. This set is a mix of tree trunks and gauzes in the foreground, with 3D sets revealed around the perimeter as the show runs.

Because of all the movement, visitors become quite disoriented. This adds to the general excitement of the immersive show. The show itself is media rich with a custom-composed soundtrack that runs through an overhead PA system and wall-mounted effects speakers. The sound is delivered to the audience using directional speakers and focused bass to ensure as little audio as possible spills outside the theatre.

A special rig integrates eight projectors with lighting and special effects. Twelve LCD displays are flown in and out of the sets on the perimeter of the show. Twenty computers run Dataton Watchout presentation, production and display software. Audio, video, scenic moving set works and lighting is controlled and synchronised using Medialon Show Control.

With *Nürbus*, DJW built a rear projection cave around a motion base to create an immersive simulation ride in a CGI tour bus travelling around Nürburgring's old circuit, the Nordschleife. The screen configuration had to be designed to cover the simulation theatre and make the most of the projection that could be achieved within the space.

The result is an exciting ride that works well with or without the simulation system working. Ceiling projection proved to be the most challenging not just to set up, but also make serviceable over the long term. DJW mounted the top projector on runners so it could be pulled to one side for servicing and lamp maintenance. It also slides the other way so the mirror can be serviced and replaced.

In *Motor Mania* visitors sit in a six-person car that runs around a virtual track where they can shoot at

targets on car parts. As they call into garages they collect a different component of their racing car – first, the engine, then the wheels, body and finally the driver. The higher their score the better parts they receive. Eventually, they see the finished result of the car they have built.

For DJW this meant creating a handshake with the ride system so the scores could be monitored and the relevant media shown for each score. As with the whole attraction, the control is programmed using Medialon Manager Pro. The system also controls lighting effects that are related to each garage as the cars go in and out.

New dimensions

A 260-seat, 4D cinema shows the story of the annual 24-hour long race around the Nordschleife. Visitors experience the excitement of the massive crowds and the speed of the race in 3D on a 16 by 7.5 metre screen.

DJW installed and programmed the projection and surround sound systems as well as interfacing the fourth dimension with smells of the engines and track, rain and, at the end, the celebratory spray of champagne.

A driving school in the *Formula One* area encourages children to race cars on a small indoor circuit, before printing out their own photo driving licences at the end. Aficionados can also examine an exploded Formula One car and speed heads race each other in Formula One racing car simulators. A public show area provides visitors with a

commentary on their own pit stop tyre change efforts. Pit walls show an animated version of data the teams see.

The *ring°akademie* quiz show gives visitors a chance to show off their racing car knowledge and fast reflexes. Visitors watch a quiz video and answer multi-choice questions using coloured buttons in front of them. When the coloured lights flash on screen, the visitors with the fastest fingers receive further points.

At the end of the quiz, the software reports the results to show control and the winner gets his or her moment of fame when all the lights automatically move to illuminate their seat and present them on screen. This is done using a pan, tilt and zoom camera that has each seat stored as a preset.

DJW developed a voting system to integrate with the game software and enable live voting, near instant delivery of results and the spotlighting and display of the winner.

In the *Truck Grand Prix* up to eight people at video arcade style interactives and one person in a compact truck simulator can race each other on an animated version of Nürburgring's south loop, the Südschleife. DJW installed and commissioned all the screens and speakers, including a massive 52-in screen in the cab of the compact truck to give the driver a 'windscreen' view.

Overall, a great result for DJW's €2.3m project which was completed in August 2009.



An F1 mechanic tells tales of how things used to be in his garage, by way of a Pepper's Ghost effect.

INSTALLATION KIT LIST

Medialon Manager Pro and Panel (four linked systems using Manager on network along with the master control tablet and 24-hr table running Medialon Panel Manager)

Dataton Watchout (HD content)

Bose Model 16 (ceiling), Model 32 and DS100n speakers, LT Panaray and MB Bass speaker system

Rear-projection mirror systems

Christie HD-8K and DS+655, DS+305W, DW5K, DW8K and HD30K projectors

Alcorn video and audio machines

CONTACTS

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