



## CASE STUDY

# Projection mapping magic at ISE 2017

Panasonic partners with projection mapping specialists to create a visual spectacular in Amsterdam.

The performance highlighted the capability of Panasonic's large venue projectors, making use of fourteen in a magic routine which took place on the hour, every hour throughout the day.

International creative design practice Painting with Light was tasked to come up with the concept for the show, and design the visual art and choreography. Together with Panasonic, the company partnered with a number of other specialists to develop the show.

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The event stage was custom designed to fit into one corner of the Panasonic stand, with a large curved screen, straight back wall and stage floor all serving as projection surfaces.

Painting With Light's creative director Luc Peumans initiated the idea of simultaneous tracking and projecting onto multiple objects. Themed around a magic show, the performance made use of projection mapping to bring images and real life together, with a dose of playful humour that worked across languages.

Michael Al Far is Painting With Light's content video producer and worked together with director Frank Dewulf and visual artist Marco De Ruyck to create the visuals for the show. "It was a complicated show to calibrate and get the mapping just right and we took on a few risks in the process," he explained. "So having a team with the right skillsets and synergies was essential to produce a great result for the client."

At the core of the show was real-time tracking specialist BlackTrax. The company has developed a special system using cameras and beacons that can track objects across both 3D and 6D (taking into account the yaw, pitch and roll of the object), and then supply that information to other systems, such as sound, media controllers, lighting or cameras.

Eight Robe DL7S Profile moving light fixtures were also linked to the BlackTrax positional data, programmed by Painting With Light's Niels Huybrechts. The show was set up to automatically start playing every hour, on the hour.



**"It's really on the cutting edge of what is available and what will be available in the future"**

The information BlackTrax was capturing about the performer's position on stage was being handed over to d3's technology, enabling the Panasonic projectors to keep track of their position and maintain the illusionary effect.

The showstopper also featured radio-controlled AirOrbs from Airstage. The German company creates bespoke flying objects for promotions as varied as trade shows, advertising and music concerts.

The 1.2m diameter AirOrbs flew around the stage during the performance, and were projected onto as their position was tracked thanks to BlackTrax's software.

The orbs were fitted with gyroscopic propellers. Piloted manually, they had to remain within the projection field so that the mapping would work.

Both the orbs and the performer were fitted with BlackTrax beacons, and the associated cameras that follow their location were positioned on the trussing above the stand. A moving panel made from screen material which moved in and out at different times was also tracked and mapped for the show.

The panel was held up by the performer at one point, as the projected image simulated an x-ray. BlackTrax's tracking gave the freedom to move the panel around without it losing the image.

The showstopper also made use of d3's Designer tool. The company has developed a projector visualiser, which allows a user to use virtual projectors to create what a show will look like on screen, before sending the content to the physical projectors on stage.

In this way, the software is able to save time and resources by cutting the amount of rendering needed. It lets show designers focus on creating content, rather than being limited by the technical specifications of the projectors, displays or lighting they're using.

"d3 takes care of all the timeline, all the content," said Sara Cox, the company's sales manager for EMEA. "We're also the central technology that's taking all of that 3D from Blacktrax, mapping it with 3D content from the simulation and then projecting it out into the real world."

A complete mock-up and trial run of the full show took place the week before the expo at Painting With Light's studio in Genk.

Airstage, BlackTrax and d3 were active partners with Painting With Light on the project, and each deployed a product specialist – John Barker from Airstage, Andrew Gordon and Marty Cochrane from BlackTrax and Vincent Steenhoek from d3 – to assist in delivering the show together with painting With Light's project manager Wouter Verhulst.

The showstopper demonstrated what can be achieved using specialist knowledge and software. "Yet again this year Panasonic has been really brave putting these three companies together with Painting With Light on the content side. It's really on the cutting edge of what is available and what will be available in the future," said Sara Cox from d3.