

PC-based control: The platform for implementing creative ideas





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In parallel with the growth in world population and the share of prosperity found within large industrialized populations, the entertainment technology industry is booming on all fronts. This trend will clearly continue in the coming decades, because as spending power grows beyond covering basic needs, the desire for and ability to enjoy entertainment and culture grows by leaps and bounds. Whether this is a visit to the opera, a musical, a live music concert, or an amusement park, people want to be immersed in a fantasy world away from their everyday life – or even forget about it for a while.

All the special effects that amaze and delight us obviously involve technology. Be it the movements of the under- and over-stage machinery that bring about a complex stage conversion within seconds, magical lighting effects that are tuned to the music, animatronic figures in theme parks, control of 4- and 5-D effects in cinemas, a kinetic installation or a water door that interacts with humans. In other words, for all the magic that captivates us, there is high-tech engineering in the background. Beckhoff control technology is used successfully in these types of applications, all over the world.

Thanks to its modularity and openness, PC-based control technology is ideally suited for stage and show technology applications. With the integration of all relevant stage technology interfaces and protocols for lighting, audio and multimedia in its technology platform – including DMX, sACN, ArtNet, SMPTE Timecode and PosiStageNet – Beckhoff offers a component kit that opens up virtually limitless opportunities for system integrators in the implementation of creative ideas.

Beckhoff has always seen itself as a developer of a universal control technology. Nonetheless, time and time again our customers amaze us by how they use our components and for what purposes. For example, when we developed our servo terminal I/O solution we didn't expect it to form the basis of the "Kinetic Rain" installation at Changi Airport in Singapore. This is a highly complex application in which 1,216 servo axes are moved synchronously, based on EtherCAT and our TwinCAT control software. We look forward to discovering further examples of how our customers, who participate in the creation of "dream worlds" as "creativity to technology translators", turn their creative ideas into solutions by leveraging technology from Beckhoff.

Our current "entertainment industry" contains numerous examples of the variety of applications and uses for PC-based control, including light control (Stage Entertainment, page 60 / Kuopio City Theater, page 64), a stage manager console (HFE, page 66), a stage turntable (HOAC, page 62), and a kinetic installation in a museum (MKT, page 56).



prolight+sound

At Prolight + Sound 2015, visitors can experience the wide range of PC- and EtherCAT-based control technology at the Beckhoff booth. With ArtNet III and PosiStageNet, we present the integration of additional protocols for transporting DMX data via Ethernet and object positions. We will also present the new AX8000 multi-axis servo system for very short control cycles and high-precision positioning.

Visit Beckhoff between 15 and 18 April at Prolight + Sound in Hall 9.0, Booth E84, and be inspired by the variety of application possibilities of PC-based control technology in discussions with our experts.

We look forward to your visit!