

# Liquid asset

Performers and technicians are getting ready for their watery new theatre with a mock-up of the automation system at its high-flying heart

**Clockwise from top: The City of Dreams complex; construction work on the multilevel track support structure above the Theatre of Dreams; a test jump over the pool; BigTow2-490 winches; the auditorium and central water stage**

It would be hard to find a more apt description for City of Dreams in Macau than Coleridge's much-quoted line "Water, water everywhere". Water plays an important role in Chinese folklore, representing luck and fortune, and it flows as a recurring theme throughout the complex. The stage of the complex's 2,000-seat Theatre of Dreams is a 2.5 million-gallon pool (about five times the volume of an Olympic-sized swimming pool). Details of the Dragone production that will open at the theatre in early 2010 are being kept secret, but while divers and swimmers set the scene in the pool, the main action will be in the air.

Stage Technologies – which has a permanent Asia-Pacific office, experience of three high-profile Macau casino projects, and a lengthy track record of installations for mega-show spectaculars – was chosen to engineer a whole-house automation system that could match Dragone's lofty expectations.

Controlled by a powerful arrangement of Acrobat-G6 fixed-position desks, Nomad portable desks and Solo handheld consoles, the system has the potential to fly more than 80 performers in the air at one time using a combination of winches mounted on tracks and moving trolleys, point hoists, line-set winches and super-fast winches that move at speeds of up to 6m/s.

The system has 139 moveable axes, of which 126 are winches, and 20 of these winches are heavyweight BigTow2-490s. With a drum length of 2.5m, these mechanical giants are engineered for high speed and high capacity, carrying up to two tonnes at 2m/s on multiple lines.

As the Macau theatre construction has progressed, some of Dragone's acrobatic actors have been getting their feet wet in the quiet Belgian countryside at the Alfacam Studios in Lint. Here, a 10-axis training system, with control and software that mirrors the mother system

in Macau, has been used not just to coach the performers but to train the operators too.

"The Lint system has been a roaring success and the operators will go on to train their colleagues when rehearsals move to China in December 2009," says Alex Hitchcock, training development manager for Stage Technologies. "Co-development between Dragone and Stage Technologies resulted in a very clever integration of software technologies, enabling us to create graphic representations of the shows that allow pre-programming in a more fully rendered real-time environment than ever before."

The Dragone rehearsal space has a large installation of AU:tour – plug-and-play cabinets built especially for touring. The Lint studio also incorporates an array of single-axis joysticks, five in this instance, which can be assigned to any of the winches in the training system. This gives riggers the ability to operate the winches autonomously, adding extra versatility and allowing training to continue while the main desk is offline for programming.

Steve Colley, head of automation and rigging at Dragone and the brains behind the ultra-high-speed Macau winches and the Lint joysticks, says that the partnership has been incredibly productive. "The beauty of this collaboration was that there was no need to look outside for other specialist subcontractors. The Stage Technologies engineers have a strong understanding of creative performance art so we could work closely with their design team, developing specially crafted equipment based on our creative needs for the show," says Colley. "Because the equipment and controls are common between the two venues this has enabled early pre-programming and 3D pre-visualisation of the more complex sequences. This is key to managing the scale of our operation and has maximised time management for the Belgian and Macau teams." ■

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