



Olympic Games - Athens 2004

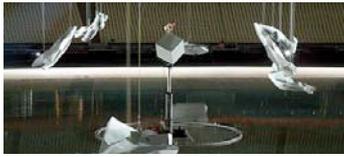


We were brought in as principal scenic and engineering contractors for the Opening and Closing Ceremonies of the 2004 Athens Olympic Games by Adam Wildi, the project's Senior Technical Director. We worked in partnership with Jack Morton Public Events to design, build, rig and operate all the complex flying sequences, along with constructing the giant lake that filled the centre of the arena for the Opening Ceremony. Jim Tinsley, our Technical Director also worked as a technical consultant, co-ordinating the work of a number of other companies contracted by Jack Morton for the Ceremonies.

The design evolved throughout pre-production demonstrating the adaptability of our team, an example being that it had been intended that the roof would support the 18 separate cable trajectories radiating from the central hub. After much consideration, however, it was decided that custom-designed towers to support the net would be superior.

"I just wanted to thank you and your team for your outstanding contribution to making the Olympics Ceremonies such a fantastic success. The production has been demanding and frustrating, but at all times you showed enormous levels of dedication and professionalism in your work. Stage One were involved in almost all the key aspects of the production... many of these elements were pushing the boundaries of what has been achieved before, but you took on the challenge and surpassed the wildest dreams of both the Technical Team and the Greek Creative Team."

Piers Shepperd
Associate Technical Director,
Jack Morton Public Events



CYCLADIC HEAD: Synchronised movement



THE LAKE: Less than 3 minutes to drain



LED RINGS : with 35 flown performers

CYCLADIC HEAD

No one who saw the spectacular Opening Ceremony could have failed to be impressed as a 17.3 metre high FRP coated Cycladic head rose from the lake to be lit up by a laser light display. The head then broke open to reveal first a Kouros figure then again to reveal a Classical figure, all built by us. During the run up to the Opening Ceremony, all 3 figures were rebuilt to form the Cycladic head a total of five times, taking 38 man hours each time.

After two technical rehearsals, a pre-dress rehearsal, a dress rehearsal and finally the Opening itself, the whole sequence worked perfectly. Then, as the 18 pieces that made up the head flew around the stadium, a giant rotating cube complete with a live performer was flown - all using our Qmotion motion control system. The same technology was also used to fly 3000 white LED's across the Olympic Stadium at 1m/s, representing the flight of a javelin.

To ensure precise positional control of the 18 pieces of the Cycladic head, we designed and developed a positional control computer from scratch. Christened Qpos, it was designed to hold five separate macro sequences, each with up to 15 minutes of motion information at each winch point.

LAMBDA - THE LAKE

The lake that filled the Olympic Stadium was technically challenging as it needed to be constructed in such a way that it could be drained incredibly fast to allow the athletes into the arena. We achieved this, with the lake taking 4 hours to fill, but less than 3 minutes to drain.

CLOSING CEREMONY

The Closing Ceremony was equally impressive with 35 performers being flown, along with large LED rings, courtesy of our nextQ software.

All the sequencing, movements and timings were worked out using 3D modelling and computer animation. The animation program was then downloaded to the winch control computers. It all sounds straightforward, but as the design evolved there were constant revisions and changes. Indeed, producing the programming sequence took a team of six people working 12-hour shifts, 14 days to complete.



DYNAMIC CONTROL: Flying 20 tonnes of FRP coated sculpture



SPECTACULAR: Cycladic head rose from the lake



CYCLADIC HEAD: Build in progress



STATISTICS:

Overall, the Games required a total of:

- 57km of varying diameter wire cable - used for the aerial cable net for the flying sequences
- 72 hoists
- 2 megawatts of power to run the automation system
- 2,162,000 litres of water covering 9,645 square metres to fill the lake
- 480 power amplifiers for the audio system
- 800 two-way radios, using 44 different channels

CYCLADIC HEAD STATISTICS:

- 20 tonnes of sculpture
- 72 hoists capable of lifting 1500kg @ 2m/s
- 2 megawatts of power
- 3km 95mm² power cable
- Over 1000 pulley sheaves
- 1km fibre optic data cable
- 2km data cable

LAKE STATISTICS:

- 2,162,000 litres of water covering 9645m²
- 168 tonnes of chipboard
- 25km of timber
- over 7000 sheets of flooring
- 5 x 40ft containers of fibre glass grating
- 400m of fibre glass profile edge
- 1500 lighting positions for LED's
- 4000 litres of liquid membrane