**CASE STUDY: recreation**

**WUHAN STADIUM**

**Consultant**

Melody Developments. One of China’s largest AV contractors and equipment dealers, Melody has overseen the design and installation of many prominent government projects since it began in 1993, including the Chinese Government Water Works and the HeNan Museum and HeNan stadium.

**Challenge**

Create a cutting edge multi-media system with two discreet, yet networked control centers for Wuhan Stadium. China’s third-largest sports arena when it was completed in 2002, Wuhan Stadium called for a system that could host multiple, simultaneous events in the stadium and its boardrooms. The system design had to incorporate the ability to access the entire network from either the main or the secondary control room, while also running one or both systems independently.

Wuhan is the capital of Hubei Province, China’s seventh largest city, and its largest inland port. The city is a significant regional center for business, tourism and sports, and required a world-class stadium to showcase national and international events.

**Solution**

The structure’s ultra-modern design is visually awe-inspiring, and incorporates state-of-the-art audio, video and communications, including high-speed Internet access for press and visiting dignitaries.

Melody Developments worked closely with Mr. Zenglai Wei, Senior Engineer at China’s Research Institute of TV & Electro-Acoustics. They took advantage of new technologies introduced as the Wuhan Stadium was planned and built – especially Biamp’s Audia® Digital Audio Platform. Audia provides a complete solution for the Stadium’s networked media system.

Both control rooms are networked using Audia, allowing audio connectivity via CobraNet® and computer control via Ethernet from either location. The Audia units are used as crossovers, with a number of different delay zones set up in the software as well. The Audia units also provide all the compression, limiting and equalization.

“...We immediately recognized that Audia could provide a complete solution to a number of the issues we faced, and redesigned our plans to incorporate it as a major component in the system.”

- MR. ZENGLAI WEI, SENIOR ENGINEER AT CHINA’S RESEARCH INSTITUTE OF TV & ELECTRO-ACOUSTICS
CONCLUSIONS

The stadium’s innovative design and audio installation place it in the ranks of the world’s best. The sound system delivers even coverage, good intelligibility and excellent general audio quality throughout the venue. The Audia-based networked media system technology became available at just the right time to enable the efficient, flexible design. Audia’s CobraNet feature conserved resources and time, while simplifying installation and maintenance. In fact, the savings were substantial. Installing four Audia units took the place of several racks of signal processing.

Thanks in part to its sophisticated AV systems, Wuhan Stadium has been chosen to host many of China’s and the world’s most significant sporting events, including the FIFA Women’s Football World Cup 2007 and the Sixth Chinese City Games, the last multi-sport games held in China before the 2008 Olympic Games.

"Instead of running many pairs of shielded cable, we were able to save a lot of money and effort by simply connecting both rooms with a single Cat-5 cable, carrying both Ethernet control and CobraNet audio information."

- MR. ZENGSLAI WEI, SENIOR ENGINEER AT CHINA’S RESEARCH INSTITUTE OF TV & ELECTRO-ACOUSTICS

SYSTEM COMPONENTS

AUDIA® SOFTWARE

4 Audia DSP units: 3 8x8 configurations; 1 4x12
2 DDA CS-8 consoles
  Vega wireless systems
  CD; other media playback
  EV CPS series amps
  Kling & Freitag Line-212 speakers
  ElectroVoice MH640, MH940, and VI-15 speakers; MH4020AC horns

directly to three Audia units - two 8x8 and one 4x12 - that provide a total of 20 inputs and 28 outputs. The console in the smaller room sends its eight outputs to a single 8x8 Audia. The Audia units output to EV CPS series amps, which drive a mix of Kling & Freitag Line-212 and ElectroVoice MH640, MH940 and VI-15 speakers and MH4020AC horns. All DSP and speaker processing is done through the Audia units.

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