BIAMP®
SYSTEMS

Case Study: Business

Arup SoundLab

Arup Chicago Upgrades its Groundbreaking SoundLab with the World's First Tesira® Install

Arup is an independent firm of designers, planners, engineers and consultants. Founded in 1946 with an initial focus on structural engineering, Arup first came to the world's attention with the structural design of the Sydney Opera House, followed by its work on the Centre Pompidou in Paris. With 90 offices in 38 countries, Arup has grown into a truly multidisciplinary organization.

The Chicago office recently expanded its offering of services from SMEP (structural, mechanical, electrical, and plumbing engineering) to now include Acoustics, Audiovisual, and Smart Building Technology consulting services. One of Arup's unique design tools is the SoundLab, an immersive listening environment that provides the ability to listen to both existing and proposed spaces in 3D. Using acoustical signatures to generate direct comparisons of different design situations, SoundLab takes the guesswork out of sound quality via aural previews of everything from concert halls and city streets to museums and classrooms.

"Tesira was an excellent DSP upgrade for the SoundLab, incorporating everything we needed including AVB capabilities."

–Ryan Biziorek
Senior Acoustics and AV Consultant at Arup Chicago

THE CHALLENGE

In order to enhance the capabilities and flexibility of the Arup SoundLab Arup Chicago needed to raise the bar on its already groundbreaking SoundLab technology.

The SoundLab is a highly calibrated environment and is inclusive in the firm's ISO 9001 certification. The audio system required a DSP unit that has the ability to handle multiple levels of tuning for each of the 13 loudspeakers. In addition to the multiple layers of signal processing for each loudspeaker, the Chicago SoundLab also required echo cancellation for video conferencing and additional analog and digital system inputs/outputs for conferencing and future expansion. Flexibility for analog and digital audio input/output was also a key component of the project so the Arup team could easily assess audio products under consideration.

> Our timeline was one of the key challenges. Biamp's local and national consultant liaisons and **24-hour technical support helped expedite the process** and troubleshoot minor obstacles that came up.
>
> *–Ryan Biziorek*
> Senior Acoustics and AV Consultant at Arup Chicago

SYSTEM SPECIFICS

Components:

Components: Tesira: 1 SERVER-IO; NetGear® AVB Switch

Arup Chicago, and other SoundLab facilities, have been using Biamp products for years. The previous installations used multiple AudiaFLEX frames linked by CobraNet®. This Tesira installation provided Arup with the ability to have all their DSP needs in one single unit, and all accessible in Biamp's intuitive GUI interface. The Tesira unit gave Arup the ability to easily expand the system for additional input/output devices, as well as having spare channels for future expansion.

THE SOLUTION

The Chicago SoundLab upgraded their technology at the exact time the Tesira was ready to ship, making this the first Tesira installation in the world.

The Tesira family of products provided the multiple channels of signal processing required without straining the DSP processors. It offered the ability to easily accommodate both analog and digital signals with the selection of I/O cards, specifically for Audio Video Bridging (AVB). Beyond just the SoundLab, the Tesira SERVER-IO also offered scalability for future office expansion and upgrades within the same chassis.

Using the Tesira SERVER-IO is an excellent way to have a single and centralized DSP unit that can accommodate a large quantity of both analog and digital inputs and outputs within a single chassis. By adding Tesira to their existing AV system, Arup Chicago simplified their access to the system architecture by only having to interface with a single configuration frame.

ABOUT BIAMP SYSTEMS

Biamp Systems is a leading provider of innovative, networked media systems that power the world's most sophisticated audio/video installations. The company is recognized worldwide for delivering high-quality products and backing each product with a commitment to exceptional customer service.

The award-winning Biamp product suite includes the Tesira® media system for digital audio networking, Audia® Digital Audio Platform, Nexia® digital signal processors, Sona™ AEC algorithm and Vocia® Networked Public Address and Voice Evacuation System. Each has its own specific feature set that can be customized and integrated in a wide range of applications, including corporate boardrooms, conference centers, performing arts venues, courtrooms, hospitals, transportation hubs, campuses and multi-building facilities.

Founded in 1976, Biamp is headquartered in Beaverton, Oregon, USA, with additional engineering operations in Brisbane, Australia. For more information on Biamp, please visit www.biamp.com.