

**Case Study: Business****United Brotherhood of Carpenters**

AVDB delivers a flexible audio solution that supports configurable spaces to provide a real-world education experience.

Carpenters are highly skilled laborers who perform in a wide array of scenarios, from simple construction framing on single-family homes to building ships and bridges to complex projects in hazardous or extreme weather conditions. These skills require years of hands-on training to master. The United Brotherhood of Carpenters is dedicated to providing education, training, and support to industry professionals from all over the world. In order to offer comprehensive instruction, the organization recently completed its international training facility, which provides both classroom and real-world education to carpenters of all backgrounds, areas of specialization, and skill levels. This facility also functions as a headquarters for more than 200 regional training centers throughout North America, and supports more than 2,500 instructors.



**“TESIRA IS A GREAT PRODUCT.**

It’s something that nobody else is doing.

I’m specking it whenever I can.”

*-Daryl Porter, Senior Sales Engineer  
AVDB Group*

## THE CHALLENGE

The United Brotherhood of Carpenters operates an international training facility in Las Vegas, Nevada, consisting of a grand atrium, training center, workshop, multiple food service areas, and two onsite hotels. The facility features 22 individual classrooms, as well as two spacious ballrooms that can each be divided to form up to six smaller spaces. In addition, the training center includes a retractable ceiling that can be opened to accommodate scaffolding, and a large water tank for underwater welding lessons. With several modular spaces designed to accommodate a variety of functions and training scenarios, the United Brotherhood of Carpenters required a flexible audio solution capable of supporting its growing facility.



**“The support from Biamp was just stellar. I can call Biamp from the field any time and I get somebody that gives me the answers I need.”**

*-Daryl Porter, Senior Sales Engineer  
AVDB Group*

## SOLUTION

AVDB of Las Vegas was selected as the integrator, with Senior Sales Engineer Daryl Porter as the project manager. As the discussion and planning of the facility's design needs progressed, the AVDB team realized that Tesira with AVB was the best solution. Tesira's bandwidth and high-channel count, combined with its flexibility and ability to integrate with devices from multiple manufacturers, made it an excellent choice for this robust installation. AVB allows the United Brotherhood of Carpenters to expand the system with ease as the facility's needs evolve and the complex continues to grow; it provides the necessary flexibility while significantly reducing the amount of wiring needed and offers easier overall connectivity. Tesira provides greater scalability with its AVB backbone by eliminating the need for a multitude of twisted shielded pairs with just a few CAT5 cables.



Speakers in the entryway atrium play a soundscape featuring ambient construction sounds, routed through a Tesira SERVER-IO, that complement the museum-quality display of antique carpentry tools. Much like an adjustable task chair or an appropriately positioned computer monitor, audio ergonomics have proven to enhance productivity while improving personal comfort. This soundscape enhances the space and complements the visual elements, providing a cohesive and immersive experience.



# SOLUTION

The primary installation was in the two large ballrooms, one on each floor. Each ballroom contains six projectors. When the ballrooms are completely open, three projection screens are combined to create a massive presentation area along one wall. Each morning, there is an address from the head of the Union. Once the address concludes, the ballrooms are subdivided into the necessary spaces for the day's training sessions. Each ballroom contains airwalls and room combiners so that they can be divided for smaller lectures and presentations. The six projectors can then be connected with a lectern containing AV controls and connected to playback devices that are in turn connected to Tesira EX-IN, which takes the four analog inputs and routes them back to the main Tesira DSP. All lecterns in the ballrooms are connected to analog floor boxes, allowing the wireless microphones in each lectern to connect to the system. The facility has a total of 14 EX-INS, including six per ballroom and two more to support additional audio needs.



## SYSTEM SPECIFICS

- EQUIPMENT:**  
**(6) Tesira SERVER-IO**  
**(6) AVB-1 Cards**  
**(14) Tesira EX-IN**  
**(9) Tesira EX-OUT**



## CONCLUSION

Due to the complexity and massive scale of the installation, including the high channel count and multiple reconfigurable spaces, there were some challenges along the way as the full scope of what was needed was realized with what was possible through Tesira and AVB. Biamp's application engineers supported the project helping the United Brotherhood of Carpenters become one of the largest AVB installations in North America.



“No other company in the industry offers this level of technical support and it is very much appreciated.”

*-Daryl Porter,  
Senior Sales Engineer  
AVDB Group*

## 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 technology 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 Rochester, New York, USA and Brisbane, Australia. For more information on Biamp, please visit [www.biamp.com](http://www.biamp.com).