THORBURN ASSOCIATES INC.
Acoustic and Technology Consultants
Designing Quality Environments
eNewsletter

February 2009

In this issue:

Welcome to the February 2009 eNewsletter!

Our new facility in North Carolina is up and running and the staff love it. When you're in the Raleigh-Durham area, please come visit.

TA will be at the following events. If you're there, please look us up and say hello.

- **Themed Entertainment Association (TEA) Industry Summit/15th Annual Thea Awards Gala**, Anaheim CA, March 6 & 7. Hosted by Steve Thorburn, the current president of TEA.
- **SMPS Southeastern Regional Conference** (Society for Marketing Professional Services), Raleigh NC, March 11-13
- **28th Annual State Construction Conference**, Raleigh NC, March 24
- **North Carolina Baptists Church Building Conference**, Statesville NC, April 23
- **2009 AIA National Convention**, San Francisco CA, April 30-May 2

As always, it is our goal to make sure that Thorburn Associates is your single point of contact for all your Acoustic and Technology Design services. If you have an idea, question or suggestion, please drop us a note at enews@ta-inc.com.

Focus on Acoustics: Acoustically Integrated Architecture in the LEED Era, Part I

The concept of **A**coustically **I**ntegrated a**R**chitecture (AIR - a term coined by Thorburn Associates) is basic enough: AIR is a best practice in which the interface of disciplines (architecture, acoustics, AV engineering, lighting, interior design, etc.) creates spaces that foster human community (offices, campuses, institutions,

theaters, retail, worship, etc.) When the building in question is a LEED structure, the physical conditions are different and a synergy of strategies is called for to achieve the ideal, integrated result.

To earn LEED credits for indoor air quality and reduce energy use, many building designs opt for natural ventilation. It's essential to go into such a project with a realistic assessment of noise levels around the building, because when you open up the shell, you opt out of complete control over the acoustical environment. Open windows, doors and/or skylights let in outside noise as well as air, which can adversely affect people's ability to conduct business and interact.

On the other hand, too little background noise creates issues of speech privacy, particularly in open-office plans. A relevant example is the San Francisco Federal Building. It relies on the thermal mass of the building and natural ventilation for its heating and cooling. The windows can open at night and close during the day. The system is effective, but without the traditional background noise of HVAC systems, a conversations can be overheard in the open-plan office areas. One of several design services Thorburn Associates provided here was a sound masking system by which audio speakers (incorporated into the indirect lights in this case) introduce an appropriate level of background noise.

Another issue that arises frequently in open offices is sound reflectivity. Depending on the shape of the ceiling, sound may bounce around a room and call for acoustical surface treatment, something that is most cost-effective when planned in conjunction with the architecture.

Part II will look at audiovisual technology in the LEED environment and appear in the next issue.

Focus on Technology: Build the Perfect Teaching Station

This is based on the popular Thorburn Associates educational session, which you can attend this June at InfoComm 09 in Orlando.

The perfect teaching station reflects the needs of the faculty, the facilities design group, and the technology maintenance people at the educational facility for which it is built.

The instructors need a simple, no-hassles, minimal maintenance system that feels like it is designed for them personally. Facilities design also wants a simple, no-hassle affair, ideally low cost, installed on schedule, coordinated with the building systems and never in need of servicing or replacing. Technologies maintenance will be looking for good security features and uniformity from room to room.

To meet these diverse requirements we start by asking lots of questions to define the functions and the issues. Should the station be a place to store equipment? Podium for the instructor? Work table? Lab table? Where does it go? What is the ideal size? How should it be constructed? What materials should be used? What are the human factors?

The answers to these and other questions enable us to start homing in on the design

process. Consider location and size: Depending on space and connections options, the station might live out in the classroom, or be hidden in a wall or storage area (in which case it must be movable). It needs to be large enough to accommodate all equipment, yet not overwhelm the presenter or take up too much space, and it must be wheelchair accessible.

Computers, AV, lighting, security, control systems and other equipment require additional decisions including connectivity. Keeping things comfortable and accessible is important. This includes sitting and standing ergonomics, sightlines, arm reach and ADA issues.

Moving toward the construction stage, materials choices include laminates over plywood, wood, plastic and metal. Rack systems can be rear-access, pullout, wall-mount or shelves. We create renderings, fine-tune and create perspectives and then detailed drawings. After the design is refined, it's time for the real thing.

Project News
Georgetown County Judicial Center

The Georgetown County Judicial Center in South Carolina is a brand new, 79,300 square foot, $19.5 million facility, designed by Michael Walker of Tych & Walker Architects. Thorburn Associates was brought onto the design team by Tych & Walker in August 2006 and construction began in July 2007.

Thorburn Associates designed AV systems for three general-use courtrooms, one master in equity/probate courtroom, two family courtrooms and one jury assembly/meeting room. Usually, we ask questions of the facility managers and end users, then develop and present a system description narrative and AV budget projection for approval. This project was different: Georgetown County informed us of their maximum AV allowance and asked us to design to that budget, which we did.

Next, we provided drawings to the architect delineating power, conduit and data requirements for the AV systems. Along with all the “day one” requirements, we made sure to include infrastructure for future expansion.

Every courtroom features full audio recording capability. Microphones are strategically located near the judge, witness, attorneys and court clerk. Additional microphones are provided around the room to capture the voices of attorneys as they address the witness or jury directly. Audio output connectors are provided for use by court reporters who use portable electronic recording devices. Each system also has provisions for connection to the latest computer based recording software.

Two of the larger courtrooms are equipped with full video evidence display capability. Individual 17-inch and 19-inch high-resolution monitors are installed at the jury box, attorney tables, judge’s bench, clerk’s desk and witness stand. Connectors for portable video devices such as laptops or portable video decks allow video evidence to be displayed on all the courtroom monitors. A DVD/VHS combination player is also provided at the clerk’s desk.

We conduct final system testing to verify that the system functions as designed, in compliance with our specification. Soon the first gavel will fall, and the bailiff will proclaim, "Court is now in session!"

Product Review: PowerPax Battery Caddy

Here's an item that exemplifies the virtues of simplicity and utility: the PowerPax Battery Caddy, manufactured in St. Charles, IL. It's like an egg carton for batteries. Loose batteries are a potential acid-leaking hazard, and hard to keep track of. The Battery Caddy solves this problem with a molded plastic unit that has two rows of cylindrical openings to hold batteries in a range of sizes, plus a hook on one end so you can hang them up in a convenient place. PowerPax offers several models, including one that glows in the dark. Visit www.powerpax.net for more information.

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