THORBURN ASSOCIATES
ACOUSTIC AND AUDIOVISUAL CONSULTANTS

eNEWSLETTER March 2004

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1. Greetings

Welcome to the March 2004 issue of our eNEWSLETTER. It is hard to believe that on April First, Thorburn Associates Inc. will celebrate its 12-year anniversary. We always get a grin from people when they realize we opened our doors on April Fool's Day.

On another note, members of our team attended the NSCA conference in Las Vegas. NSCA is the National Systems Contractor Association. The conference is one of the major industry shows where new audiovisual products are introduced. This year it seemed like everything had some form of computer network connector. It became so comical we expected to see them on the back of loudspeakers. It seems that the long predicted convergence of technology is now here!

As always if you have an idea, question, suggestion please drop us a note at TA@TA-Inc.com for general information or eNews@TA-Inc.com for specific comments about our eNewsletter.

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2. CSI's MasterFormat™ 04 and its Impact on Our Work

The current status is that late in 2004 the Construction Specifications Institute (CSI) will formally publish the new MasterFormat™ layout. Over the last few years the MasterFormat™ Task Team has been working on the first major update in 38 years. MasterFormat™ is the most widely used standard for organizing specifications in commercial building projects in North America. It provides a master list of titles and numbers for organizing information about construction requirements, products, and activities. Standardizing this information improves communication among the people involved in building these projects, which makes it easier to meet the owner's requirements, timeline and budget.

The 16 Divisions that we are used to working in is expanded to 49 Divisions to encompass new subject matter. The goals for the update include:

1. Impose as little change as possible into the divisions that have composed the architectural building subjects.
2. Make MasterFormat™ more acceptable to building engineering disciplines.
4. Expand MasterFormat™ to cover other than building construction.
5. Revise MasterFormat™ to follow classification principles such as the National Cad Standard.
6. Provide space for expansion within each division.
7. Maintain organizational consistency among divisions.

What all of this means is that we will need to become familiar with the new six digit numbering system that replaces the current five digit system. The other major change that affects Thorburn Associates' design work is that audiovisual and technical systems will move from Division 11 into the new communications section, Division 27. Acoustical finishes, framing and other building products remain unchanged, but HVAC and electrical have moved to Divisions 23 and 26 respectively.

More information on the expanded MasterFormat™ can be found at http://www.csinet.org/masterformat/.

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3. "I Didn't Know You Did That"

If we just had a nickel for every time we hear *"I didn't know you did that!"*...

Most recently, a very good client was sharing an elevator ride with us and mentioned he needed someone to do an audiovisual system design. He has used us frequently for acoustics, but never realized we also did AV!

So… For the record, Thorburn Associates Inc. is an Acoustical Consulting AND Audiovisual Engineering firm that provides a broad range of design and engineering services. These services tend to be split 50/50 between acoustics and technology design.

Acoustical Consulting services include:
- Room acoustics
- Sound isolation
- Mechanical noise and vibration control
- Environmental noise abatement

Technology system engineering services include:
- Audio systems
- Video systems
- Control systems
- Network system design – as it relates to the technology systems
- Lighting design for videoconference and broadcast facilities

For both acoustics and technology systems we provide:
- Project management / construction administration / acoustical testing
- Room modeling to predict how a room will sound once it is built.
- Expert testimony when noise from freeways, rapid transit, aircraft, plumbing, music, mechanical equipment, or adjacent tenants interferes with a client's day-to-day use of a facility.

If you would like to discuss any of our services in further detail, please do not hesitate to contact us or visit the Services section of our web site (www.ta-inc.com/services.htm).

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4. Blast Berms for the Space Shuttle Launch Pad

We are often asked what type of acoustics we specialize in. Our response: "Everything – The field of acoustics is so specialized we can not afford to focus on one type of building. The only type of structures we have not been part of in some form are a Nuclear Power Plant or a Concert Hall." Working on the Space Shuttle Launch Pad a few years ago was one of the more unique projects we have had the pleasure to work on.

The three main elements that make up the Space Shuttle Vehicle at the time of the launch are: an orbiter, which carries astronauts and payloads into orbit; an external propellant tank; and two unmanned solid rocket boosters. The boosters burn in unison with the orbiter's three main engines, providing the primary thrust to get the Shuttle off the ground.

At the Kennedy Space Center there are a number of security layers. The layer closest to the Space Shuttle Vehicle is referred to as the Perimeter Fence. The problem was that the energy generated by the Shuttle engines and booster rockets sends loose materials and vegetation flying into the chain link Perimeter Fence with enough energy to require major repairs to the fence after every launch. To save money and effort NASA wanted to explore the effects of installing a large earthen berm to protect the perimeter fence. NASA's concern was that the berm could reflect acoustical and blast energy back to the shuttle and affect the shuttle during lift off.

Working with the Cocoa, Florida office of Tilden Lobnitz Cooper, Thorburn Associates spent two weeks of time reviewing four different designs of varying lengths, heights and slopes. Our summary finding was:

> ***"We have reviewed the four different designs using three different methods. By berm scale, by traditional manual ray tracing and by computer simulation. All three methods indicate that the berm will not redirect acoustical and pressure energy back to the Space Shuttle Vehicle at the launch pad at the beginning of the flight or while in the air along the flight path."***

This project was one that let us go behind the scenes, where we typically could not have access, and help develop a solution to a once in a lifetime problem! It was just as exciting as seeing the shuttle taking off from the Old Denver Airport, on the back of a 747, for one of the program's initial tests back in 1978.

The project has taken a back seat to other Shuttle projects due to the tragic loss of Shuttle Columbia on 1 February 2003. The next Space Shuttle Launch is scheduled for no earlier than March 2005.
NASA's Web site www.ksc.nasa.gov has a lot of very good information if you would like to learn more.

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5. Invisible Loudspeakers

Stealth Acoustics produces a family of invisible, flat-panel loudspeakers, designed for flush wall or ceiling mounting that sound great!

The new loudspeakers from Stealth Acoustics offer a truly invisible loudspeaker solution for whole house audio, surround sound, paging, masking, foreground music, board room audio and other applications that require a full-range loudspeaker with wide dispersion. Installation is simple, as the loudspeaker mounts to industry standard 16 inch wall stud framing during construction, fits into a standard 2x4 wall depth and can be thought of and treated as a piece of sheetrock. The final wall finish may consist of any light texture and paint or normal weight wallpaper. For high-end environments that utilize wood finishes, the Stealth Acoustics product line is also available with an unfinished veneer wood panel surface, of just about any species, which can then be finished to match the final wood trim of the room. The result is great sound and an end to the "Aesthetic Pollution" caused by cluttered walls and obtrusive loudspeaker grilles.

Check them out at -- www.stealthacoustics.com

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