



# systems contractor news

advancing the business of sound, video & electronic systems

June 2004

## inside

Testing 1, 2, 3  
How audio analysis measures up...66



Hangin' Tough  
Install deserts standard flying practices...72

## inventor profile



Hall Research connects with Cat-5...86

## contractor profile

Joseph & Associates is caught on video...88



# InfoComm in the Spotlight

## See And Hear How To Network A Connection

by Kirsten Nelson  
**A** trip to Atlanta is on the agenda for many in the audiovisual industry this month, as the opportunities offered by the InfoComm conference and exhibition command attention June 5-11

at the Georgia World Congress Center. A glimpse at consultants and contractors' list of things to see while visiting this tech-centric city reveals that the industry is indeed "AVolving" in accordance with the message InfoComm began to promote at last year's show.

In seeking the tools for this mission, systems integrators will be walking the aisles of the show floor with one goal. "Innovation, that's what I'm looking for," declared Josh Weisberg, president of Scharff Weisberg. "I want to see product designs that break the mold, do it differently and were

(continued on page 113)

\*\*\*\*\*AUTO\*\*5-DIGIT 94546  
SCN 0527588 27/1406  
JULIA NGUYEN  
MKT ASST  
THORBURN ASSOCIATES  
20880 BAKER RD  
CASTRO VALLEY CA 94546-5729



Olympic venue installation coverage from Athens, Greece  
—page 14



## TT24 DIGITAL LIVE CONSOLE

SEE IT LIVE AT  
INFOCOMM  
BOOTH #3027

The first digital live console designed by analog mixer fanatics.

**MACKIE**  
www.mackie.com



themed

## entertainment

steven j. thorburn



# Flight Pattern

Employing Teamwork  
From The Ground Up

**R**ecently, while waiting at the Montréal airport for my return flight home, I enjoyed a great example of teamwork—snow removal. It was the big fluffy flakes, the “White Christmas” type. The weather folks said they were expecting five centimeters, but from the looks of it, we were getting more like 10 and it was still coming. From experience growing up in Michigan, this was the type of snow that while work to remove, was more pleasant than others; it was not sticky, not too cold, just some good work, more like sweeping than shoveling. The good thing was flights were not “delayed.”

In Montréal, the Air Canada concourse and supporting service buildings are in a ‘U’ shape with airplanes on one side and at the bottom of the U. What caught my attention when I first sat down by the windows were the two trucks cleaning out around the aircraft gate parking area. One was a small John Deere with a rear-attached scraper/hopper, so all of the snow was caught and pulled behind—it did not leave a mound for the baggage trams to fight with. It would fill its hopper and then drag it out to the center of the taxi area and dump it for the other truck to deal with. The sole job of this first truck was to support the gate workers and keep their area clean. It then passed its work product off to others that could more easily remove the snow from the area.

The second tractor I watched was a Caterpillar plow of sorts. It had a wide U-shaped blade, and the two wings could be adjusted in or out to make a long, flat blade as needed. Its primary job was to clean out vacant gate parking areas (i.e., those not occupied with an aircraft). It would gather snow until its hopper was full. It would also push the snow out to the center, but once it had cleared all of the area it could, its job changed. It flattened out its blade and went to work on the snow in the center of the U.

Also working the center of the U were two snowplows with wide blades on the front and a swing-out blade on the passenger side. With both blades they could each clear a path in one pass that appeared to be at least 30 feet wide. In almost fighter-plane formation they would start at one end of the gate area and make their first “strafing” pass at pushing the snow out into the center. All of a sudden, a 60-foot-wide path was cleared. When they got to the other end, they did a turn, and rotated the front blade the other way, retracted the fixed passenger side blade and came back across the concourse tarmac. Another 30 feet



▲ The teamwork required to plow through a snowstorm at the Montréal airport is not unlike that required for a typical A/V project.

was cleared. This kept up only slowing to allow aircraft to back out or come in. This is when the Caterpillar plow would come and go. If it could not work at a gate it worked with the big plows. Part way through this process, a snow blower would come into the picture to remove the furrow of snow that was built up by this team of snow-removal personnel.

OK, so this is a rather long description of a rather mundane process, but it is a great example of teamwork. There was no way that one person or machine could have kept up with the “downpour” of snow. They needed the momentum of the team, and they could not stop or slow down to keep up with the job. Otherwise the airport would have to close with the associated loss in revenue, upset travelers, system-wide delays, etc. The other point is that the snow removal team had a number of different tools. They had the big plow, the small plow, the snow blower, the front-end loader and the truck; and each was the correct tool for the job.

There are very few audiovisual projects that can be completed from the start to finish by a single person. The salesperson needs help building the market and branding the firm. Someone needs to design and engineer the system. The installation comes next, and it always seems that a crew of two can get a lot more done than two one-person teams. And, of course, there is the programming and the training on how to use and maintain the system.

So how do we build our teams; how can we apply this to the audiovisual industry? It was no accident that the snow-removal team was so efficient—they had lots of practice. I would wager that they also had detailed written “operational procedures” and that as long as they knew how to work a machine they could have switched machines and the result would have been the same and in just as efficient a manner. That’s because for them it was a “job,” not a “project.” Each part of the snow-removal process was broken down into

manageable tasks (gate plowing, center plowing, worker area snow blowing, etc.). And there were even backup tasks to keep each team member productive (when you can’t gate plow, then help center plow—don’t just sit idle).

How often in our industry do we define the work process—what we go through—into the lowest common skill set? How often do we run training drills or have people practice a skill prior to going out to do a job? And what about cross-training; how often do we teach programmers how to hang loudspeakers (when you can’t program, then hang loudspeakers—don’t just sit idle).

For whatever reason, our industry seems to prefer the school of hard knocks or on-the-job training rather than the formal training ICIA and NSCA has been leading. Compare our industry to that of the rest of the design and construction industry where every person is licensed—the architect, the engineers and the contractors. By having this formal training, professionals can come together and form a team for a project, by using the skill set they have for their jobs, to fulfill their role for that project, on that team.

Teamwork does not just happen, it has to be worked at. But one of the best ways to improve the performance of any team is to make sure that each team member is well trained and knows what their “job” is as part of that specific team. As much as we would like, we may not always be able to get the “best” person for the job, we may have to settle for the second best or third best. But if that person is adequately trained with access to documented procedures, they will be able to perform their job as part of a successful team.

Steven J. Thorburn, PE, (SJT@TA-Inc.com) is co-founder of Thorburn Associates, an acoustic and audiovisual system design and engineering firm with offices in northern and southern California and North Carolina. He is active in the design and development of projects around the world.

## Comprehensive Catalog Released

SOUTH HACKENSACK, NJ—

Comprehensive’s greatly expanded 2004 catalog is now available. The catalog has more than 2,500 new products, containing thousands of professional multimedia products for pro video, systems integration, broadcast, presentation, pro audio, security and home theater applications. New for 2004 is the addition of some leading brands including Belden, Canare, Neutrik, Monster Cable, Knox and Shure.

Comprehensive’s 2004 catalog quadruples last year’s product offering with a greater emphasis on multimedia products. Comprehensive introduces a complete line of new broadcast cables, micro VGA cables, HDTV cables, as well as an expanded offering of HDTV, Cat-5 and DVI electronics. For a free copy of the 2004 catalog, e-mailsales@comprehensiveinc.com, call 800.526.0242, or visit the website.

► Comprehensive  
[www.comprehensiveinc.com](http://www.comprehensiveinc.com)

## SMART Ideas 4.1 Now Available

CALGARY, ALBERTA, CANADA—SMART Technologies has released SMART

Ideas 4.1 concept-mapping software in English and French for the Microsoft Windows operating system and Mac OS X, enabling teachers and students to create colorful, multilevel concept maps in their preferred platform and language. According to the company, SMART Ideas software is the only concept-mapping software that combines cross-platform compatibility with the ability to switch easily between English and French.

SMART Ideas software enables students to capture and organize ideas in multilevel concept maps during brainstorming sessions and class discussions. Students can easily arrange and link visuals that map simple or complex sequences of ideas. Completed maps can be exported to HTML, Appleworks and Microsoft Word, so students can share their diagrams with others or explore further during independent study. SMART Ideas software also features Cliplets, interactive clip-art images that students can manipulate directly to learn concepts such as telling time, measuring angles and calculating probability. For example, students can rotate the hands on the image of a clock to learn how to tell time and then use the accompanying digital clock to check their answers.

► SMART Technologies  
[www.smarttech.com](http://www.smarttech.com)