



## TONY GAMBINO

by Ashley Foley

**A**ercoustics Engineering Ltd. is a company located in Toronto that deals with the three disciplines of sound: acoustics, noise, and vibration. Tony Gambino, a longtime employee of Aercoustics, takes pride in his job, whether the project is acoustic testing at the CBC Broadcast Centre, monitoring vibration for the Toronto Transit Commission (TTC), demonstrating floor vibration control for the Art Gallery of Ontario, or measuring sound levels from a wind farm.

Acoustics deal with "how the room will sound on its own," and Gambino has worked on a number of these projects. They range from concert halls, to libraries, to factories, and even classrooms. "We have worked on many concert halls," he notes, including Korrner Hall located at The Royal Conservatory of Music in Toronto. That facility in particular needed state-of-the-art acoustics, noise control, and isolation from underground subway noise in order to ensure a pleasant sound inside.

Gambino has worked on scores of noise and soundproofing projects in Toronto, dealing with media outlets including CityTV, Bravo!, and TSN, but his biggest media project has been at the CBC Broadcast Centre.

"I was basically working every day at the CBC Broadcast Centre while that facility was being completed," says Gambino. He explains how the CBC complex has hundreds of "engineering spaces," ranging from editing suites, performance studios, control rooms, auditoria, offices, and the like. Gambino, being in charge of the CBC testing, grouped about 50 "technical" spaces and began testing, reporting, and re-measuring to ensure broadcasts would be acoustically clear and free of outside noise distractions.

"As a result, other broadcast companies became very interested," says Gambino. "After it was built, we had interest from all over the world to see how we did things." He explains that people from studios in Manhattan and even representatives from Asia visited CBC to study how to produce similar structures that could rival the NHK facilities in Japan. "They were impressed that we Canadians were able to build a studio/broadcast facility that large in a busy urban environment and make it acoustically isolated, yet realistically functional."

The third specialty discipline of Aercoustics is vibration. "Most of the time when we look at vibration, we are concerned with the effect of vibration on people," says Gambino, "namely, where they live." Much of the work Gambino has been involved in with vibration has dealt with rail noise, including both residential housing near railways and the TTC subways impacting nearby commercial business. Gambino was largely involved in a three-year TTC study, starting in 1992/93, which included both subway trains and streetcars; however, ground-borne noise can arise from vibration generated by a wide variety of industry and machines. At both ends of the extreme are the low vibration limits required for MRI machines or the high vibration limits that can produce structural damage in buildings.

"One thing about Aercoustics is that there is a wide variety of projects on the go," says Gambino, who appreciates the big, fascinating projects such as TTC and CBC but also has a warm appreciation for the small ones, too. "They are all so diverse and unique and all very interesting" he says, which helps to give him and his co-workers breaks from the long projects.

Gambino says he plans to stay and grow with Aercoustics in



*Gambino conducting a performance verification of a subway exhaust fan using high-velocity acoustic measurement tools.*

the future because it brings unique challenges and changes at all times. Not only are the projects changing, but so is Gambino's role within the company.

Since Aercoustics has grown drastically since Gambino joined the team, he is now teaching new, young engineers and technicians how to "work efficiently, and how to know when they have good measurements and reliable data – and to be efficient at the same time," he explains. He also notes that it is important to find a "fix" for clients. "To come up with those solutions that are unique and innovative, and that work," he says – something that fits both logically and financially.

"The one thing that I've always noticed is having to think outside of the box," he says in regards to the company. For example, he used an existing large span floor at Pearson International Airport to demonstrate floor vibration control for the recent Art Gallery of Ontario expansion.

Gambino has been fascinated with sound since he was a child, running the A/V department in elementary school. When in high school, he was involved with productions in terms of sound reinforcement and actually laid down the procedure that the drama department would employ to do sound for plays, even after he had graduated.

In senior high school, Gambino entered the Peel Regional Science Fair as a 12<sup>th</sup>-grade student, against O.A.C. students. He built a sound system that won him second prize. Today, Gambino is leaving his sound engineering footprint in residential homes, local businesses, national institutions, and international corporations.

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