MARCH 2005

2004-2005
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Presentation, Tour

In-Ear Monitoring Systems

Steve Armstrong, Gennum Corporation

Date: **Tuesday, March 29, 2005**
Time: **7:30 pm**
Where: **Gennum Corporation**
970 Fraser Drive,
Burlington, Ontario L7L 5P5
MAIN ENTRANCE

For map, goto www.gennum.com/corp/Gennum_Map.pdf

Pre-Meeting "Dutch Treat" dinner 5:30 pm at Shoeless Joe's at 4045 Harvester Road, Burlington.

Typical in-ear monitoring systems currently provide a direct feed of the audio signal from a monitor board while providing little more than a volume control for the performer. They are completely at the mercy of their monitor engineer, if they even have one, and they must acquire racks of outboard gear if each performer is to have individual processing.

Meanwhile, the earphones worn are deeply inserted to provide isolation, resulting in occlusion (plugged ears, disconnected feeling) that can result in difficulty with pitch, poor communication with other performers and the audience, lack of directionality of the instruments, poor perception of the surrounding physical environment, and for some, even problems with balance. Until now, the solution to this problem has been either pulling out one of the earphones or mixing in "ambiance" microphones. Removing one earphone provides only half the monitoring while defeating the hearing protection aspect of in-ear systems. Ambiance mics provide only an un-localized mess of stage sound at a fixed volume level.

Gennum has arrived at a more elegant solution that addresses all of these problems in a user-friendly, personalized manner.

Mark your calendars for *Saturday, April 23, 2005*. The Toronto AES is presenting the **AES Surround Sound Interactive Seminar: Recording, Processing, Delivery and Listening.** A day-long event at the CBC Broadcast Centre of panels, workshops, demonstrations and tutorials presented by the movers and shakers in the surround sound industries. More details coming soon!!

P L E A S E   P O S T   -   M E M B E R S   A N D   G U E S T S   W E L C O M E

About Our Presenters….

Gennum Corporation is a Canadian high technology company that designs, manufactures and markets silicon integrated circuits (ICs), modules, thin-film hybrid microcircuit components, and finished devices for a variety of applications in three target markets:

Audio and Wireless: Gennum develops and supplies a wide range of components for use by manufacturers of analog and digital signal processing hearing instrument products. The company's integrated circuits can be found in almost two-thirds of the world's analog hearing instruments, and it is positioned to achieve rapid penetration of the digital segments. Gennum has also developed some of the most advanced Bluetooth wireless headsets on the market and is working on a number of professional audio and music products.

Video Products: Gennum is the leading provider of high-performance components to video equipment and systems manufacturers for broadcast television studios and production and post-production houses for video and film content creation and display. The product range encompasses analog video processing, serial digital video transmission, video format conversion and image processing for both standard and high definition TV and display applications.

Data Communications: Gennum is developing high-performance ICs for very high-speed serial backplane applications and optical transceivers for future broadband infrastructure data networking equipment.

Gennum serves an international customer base from its headquarters in Burlington, Ontario, a design center in Ottawa and subsidiaries in Japan and the United Kingdom. The company employs approximately 600 skilled employees who share a commitment to excellence and to continuous improvement. Gennum's Quality Program in Burlington, Ontario is registered to ISO 9001:2000 and ISO 13485:1996 and is constantly evaluated through internal and external audits.

Steve Armstrong BEng
Chief Product Architect
Audio & Wireless Group

Steve has been focused on the Hearing Aid field's special requirements for the last 20 years. As a graduate of McMaster University's Electrical Engineering program he has had the chance to develop strong Analog and Digital IC design skills but now spends most of his time focusing on the application of the technology. Electro-Acoustics, Psycho-Acoustics and DSP algorithm development are what keep him up late at night these days.

   With 5 granted patents (and others in progress) his contribution to the technical aspects of personal audio amplification are easily recognized. Many of his development activities form the basis of revenue for Gennum Corporation, and the role of Chief Architect is significant to setting the roadmap for future evolution.

Keith Gordon MBA, BA
Product Manager
Audio & Wireless Group

Keith spent the 90's leading a Jekyll and Hyde life. By day, he wore a suit and ran the Manitoba Government's recording department. At night he let his hair down (literally) and focused on live audio, striving to achieve the best sound under what were often less than ideal circumstances. Meanwhile there was some studio recording, sound for pictures, video production and sound system installation thrown in for good measure. Luckily as a graduate of the Ontario Institute of Audio Recording Technology's Honors program, he had a strong grounding in the fundamentals.

   In 2004, Keith graduated with an MBA from the Schulich School of Business at York University. Having done his Master's Thesis on Gennum, he was hired to assist in bringing Gennum's technology into the professional audio and music products area. Converting Steve's ideas into reality are what keeps Keith up late at night, if there isn't a good concert in town.

February Meeting Review: **Mastering for Stereo and Surround with Bob Ludwig**
"The creative purpose of mastering is to maximize the inherent musical value of a given recording; to enhance the details, soundstage, dynamics and equalization." Goto www.torontoaes.org for a full review.

Sponsor coffee and donuts for an AES meeting and in return, we will run an ad in the Bulletin for your company. Contact Toronto AES Secretary Robert Breen at TorontoAES@TorontoAES.org for more information.

May Toronto AES Meeting: Tour, presentation of Four Seasons Performing Arts Centre. See the future home of the COC, currently under construction.