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THE AUDIO ENGINEERING SOCIETY

BULLETIN



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Presentation

IMAX nXos2 Multidimensional Audio

IMAX and Technicolor

date Tuesday, 9 December 2014
time 7:00 PM
where Technicolor Toronto
49 Ontario St, Toronto, ON
The parking entrance is at 82 Berkeley St.

Pre-Meeting "Dutch Treat" dinner 5:00 pm at the "Dub Linn Gate" Irish Pub
474 Adelaide St. E., at Ontario St. (next door to Technicolor)

NOTE: THIS EVENT IS OPEN TO AES MEMBERS ONLY.

Space is limited to 45 seats, reservations are required and will be taken on a first-come, first-served basis. Invitations have been emailed through Eventbrite to the Toronto AES membership list.

PRESENTATION

IMAX has developed nXos2, a new multidimensional audio playback system for its theatres, which involves newly developed and positioned height and side speakers supplementing the traditional IMAX loudspeaker configurations that create an immersive surround experience and which can be appreciated by all theatre patrons (the multidimensional image does not collapse). The system relies on principles derived in part from ambisonics.

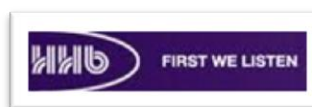
The system has been presented to Hollywood film industry executives, where it was well received.

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THIS MONTH'S MEETING IS SPONSORED BY



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PRESENTATION *continued*

This system was designed at IMAX by a team led by Denis Tremblay (including researching and implementing the psychoacoustic principles guiding it, and all hardware design), and the system is installed in the primary screening room at IMAX's Santa Monica California facility, in IMAX's head office sound track mastering facility and Technicolor Toronto, as well as at an as-yet unannounced theatre in Toronto.

The evening will feature presentations on immersive sound, nXos2 technology in cinemas and mixing tools by IMAX engineers Denis Tremblay, Manager Electrical and Audio Engineering, and David Ramsahoye, Manager, Audio Technology and Soundtrack Mastering, and Cory Mandel, Supervisor of Sound Services, Technicolor Toronto, who will present a demo of the technology along with a tutorial on mixing for the new format.

BIOGRAPHY

Denis Tremblay, Manager Electrical and Audio Engineering, IMAX



Denis Tremblay has worked in electronics, with an emphasis on audio, for nearly forty years. His career spans the end of the vacuum tube era to today's world of DSP.

Originally from Sudbury Ontario, he moved to the Toronto area in the early 1980s when he obtained employment with EMI Music Canada (Capitol Records). In the mid-1990s he moved on to Sony Music Canada where he was promoted into management and worked primarily in compact disc manufacturing. During this time period he was elected chair of the Toronto Section of the Audio Engineering Society. When layoffs

began to affect the music business, he left Sony Music to work for a succession of automation contractors writing software for industrial control systems. He returned to the world of audio with a position at Aercoustics Engineering. Denis joined IMAX as a member of the design team that created the IMAX digital projection system. Denis is Manager of Electrical and Audio Engineering at IMAX, managing a group comprised of eleven people. Denis continues to be actively involved in R&D projects and is listed as an inventor on IMAX patents. Denis lives in Brampton Ontario with his family. He is a hobbyist musician with a fondness for Stratocaster guitars.

David Ramsahoye, Manager, Audio Technology and Soundtrack Mastering, IMAX



David Ramsahoye was exposed to audio while performing with different bands in Ottawa, and he decided to take audio a little more seriously. He began working in clubs and landed an Assistant Engineering job at a Post facility. Realizing that there was a great deal to learn, he applied to the Harris Institute for the Arts to get some formal training. After graduating Harris in the Spring of 1995, David started an interning position in broadcasting at CityTV/ MuchMusic/ BRAVO!. One month later, interning

turned into part-time employment. Three years later, part-time turned into full-time. Once full-time, David's main responsibility was mixing the live bands for CityTV's Breakfast Television. In 1997, David was hired by MuchMusic and promoted to Senior Audio Operator. This promotion resulted in David mixing most of the live performances that came out of the CHUM Building. In 2001, David received a Gemini Award Nomination: Music Mixer Best Sound in a Comedy, Variety or Performing Arts Program or Series

“Live at the Rehearsal Hall: Mediaeval Bæbes”. In the Fall of 2001, David moved on to the IMAX Corporation as the Senior Audio Engineer in the Soundtrack Mastering Facility. His main responsibilities include ensuring proper mixes and supplying the many soundtrack formats to all IMAX theatres. In 2003, he was promoted to Manager of Audio Technology. In addition to his previous responsibilities, David is now responsible for Profit and Loss forecasts, maintaining and meeting budgets, staff reviews and all equipment purchases – essentially running a small business within a corporation. Also in 2003, David was presented with the “Harris Institute for the Arts Award of Excellence”. This award is presented to graduates who have made notable contributions in their field. As of June 2013, David and his group supports 880 IMAX theatres in 54 countries.

Cory Mandel, Supervisor of Sound Services, Technicolor

Cory Mandel has worked as a Re-Recording Mixer, Scoring Mixer and Sound Designer out of the Toronto area for the past 30 years. His production company specializes in multi-channel surround sound production for special venue theatres. His current main focus is as a re-recording mixer and scoring mixer for IMAX theatrical features. Cory also works as a scoring mixer for 5.1 theatrical features and as a re-recording mixer for television movies. In commercial audio, Cory specializes in 5.1 cinema-spot mixing. He's been nominated for and awarded various Emmy, Gemini, Genie and MPSE awards for sound mixing. Cory works out of Technicolor Toronto's flagship THX certified mix theatre, Theatre 1, which he helped design in 1999.



Toronto AES Masters of Audio Series

➔ **Check out our new Toronto AES Masters of Audio series, featuring:**



[Toronto AES Seminar 2008](#)

The Roots of Our Toronto Sound

A video of Recollections and Reflections on the 40th Anniversary of the Toronto Section of the AES with interviews featuring many of the studio owners, managers, designers, music producers and recording engineers, live sound company owners, professional engineers, scientists and gear designers who were or are active in the Toronto pro audio world over the last forty years.

[Tribute](#)

Neil Muncy



Neil Muncy, Audio Engineer, 1938 - 2012, was a friend, colleague, teacher, and mentor to several generations of audio practitioners. Toronto AES held a special tribute evening, featuring thoughts and memories of those who knew him as a friend, who worked with him as a colleague.

We present video from this tribute, along with an audio series of interviews conducted by Alan Hardiman with Neil Muncy featuring stories and anecdotes from Neil's long career as a techno guru, designer and engineer..



RETROSPECTIVE

Audio Research Group

The university of Waterloo's Audio Research Group is an important legacy of Drs John Vanderkooy and Stanley Lipshitz, out of which resulted significant research and graduates who now hold leading positions in prominent audio companies of the world.

We profile the work of an important education force in our audio society and the impact it had on its alumni and their careers.

www.torontoaes.org/masters_of_audio/index.html



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http://www.torontoaes.org/download/2014-15/AES_2014-11.pdf

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