

### THE AUDIO ENGINEERING SOCIETY

#### BULLETIN

DECEMBER 2005

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Presentation and Annual Christmas Social

# Loudspeaker Testing: @Home and on the Road

Sean Olive, Harman International

Date: Tuesday, December 13, 2005

Time: 7:30 pm

Theatre D Digital Where:

555 Mount Pleasant Road,

Toronto, Ontario

Pre-Meeting "Dutch Treat" dinner 5:30 pm at Casa Di Giorgio, 517 Mt Pleasant, www.casadigiorgio.com for directions. Christmas social following the meeting.

Sean Olive, Manager Subjective Evaluation R&D Group for Harman International will discuss their latest research on loudspeaker evaluation methodology for consumer loudspeakers in the home and in the car, including a description of the Reference listening room at Harman's Northridge, California facility. See Page 2 for details.

## **Digidesign Venue Presentation**

Robert Scovill, Digidesign

Date: Tuesday, December 6, 2005 Time: 7:00 pm (tour at 6:30 pm)

Where: Young Centre for the Performing Arts, Theatre B

> 55 Mill Street. Toronto, Ontario

(one block south of Front St. off Cherry St)

Robert Scovill, Digidesign's Live Sound Market Manager and noted audio engineer, will present the new Digidesign Venue live sound reinforcement console. The event will include will include a walkthrough tour of Toronto's newest, state-of-the-art performance venue. See Page 3 for more details.

#### About the Presenters...

### Sean Olive Manager Subjective Evaluation R&D Group, Harman International, Northridge, California

Sean Olive is currently Manager of Subjective Evaluation at Harman International, a position he has held since 1993. He is responsible for overseeing proper subjective testing of Harman consumer and professional products, including the development of facilities and methods used for these tests. Prior to that, he was a research scientist at the National Research Council in Ottawa, Canada, where he worked with Floyd Toole on measuring loudspeakers and their interaction with rooms.

He holds a Bachelors degree in Music from the University of Toronto, a Masters degree in Sound Recording from McGill University and is currently pursuing a Ph.D. from McGill. His Ph.D. research deals with modeling and predicting the perceptual attributes and preferences of loudspeakers in different rooms.

Sean is a fellow and a past governor of the AES, a past chair of the LA section, and a member of the AES technical committee on Perception and Subjective Evaluation of Audio Signals. He has authored or co-authored 25 papers in various AES publications, two of which won AES Publication Awards. He recently co-authored with Floyd Toole a chapter on Subjective Evaluation in the 3rd edition of John Borwick's Loudspeaker and Headphone Handbook.

#### **Topic Overview**

The final arbiters in the judgment of sound quality are usually our ears. In the audio industry, these judgments can impact the design of a product and ultimately its commercial success. Given the high-stakes involved, logic dictates that the judgments be as unbiased, accurate and reliable as possible. Yet today we see and hear many examples of products that suggest the contrary. Subjective reviews of products in the audio press frequently have no positive correlation with our experiences with the products. Is the lack of consensus related to differences in how the technical and subjective measurements were conducted? Or is it simply a case of the widely held belief that sound quality and preference are highly individualistic tastes that cannot be reliably measured, modeled or predicted?

This talk addresses these questions by reviewing the numerous factors that bias and influence the accuracy and reliability of listening tests, and how to control them. Done properly, listening tests produce very precise and repeatable results that highly correlate with a set of technical measurements. Some recent research involving 268 listeners that included trained listeners, audio reviewers, retailers, students and marketing-sales show that in terms of discrimination and reliability not all groups are equal. However when all groups are presented the same sounds under the same conditions, there is remarkable agreement in their preferences. Given the apparent universality of preference in sound quality, one can safely extrapolate the preferences of trained listeners to those of untrained consumers. Methods for training and selecting the most skilled listeners will be discussed.

The prohibitive costs of listening tests make the use of technical measurements an attractive alternative, although one must be able to accurately interpret their subjective meaning. Consumer Reports magazine is one organization that relies entirely on acoustic measurements to predict the sound quality rating of a loudspeaker. Recently the author tested their model and found it to be quite poor at predicting listeners' preference ratings. This has led to the development of a more accurate predictive model that can potentially eliminate the reliance on listening tests for future product development. The benefits include a higher quality product developed in less time for lower cost.

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#### Digidesign Venue Presentation with Special Guest Robert Scovill

The Toronto chapter of the Audio Engineering Society (AES) in conjunction with Contact Distribution are pleased to announce an upcoming presentation of the new Digidesign Venue live sound reinforcement console by special guest, Robert Scovill – Digidesign's Live Sound Market Manager and noted audio engineer.

The event will take place on December 6<sup>th</sup> at the Young Centre for the Performing Arts, and the evening will include a walk-through tour of Toronto's newest, state-of-the-art performance venue.

Engineer **Robert Scovill** is a world renowned, 27-year veteran in live audio. A six-time TEC award recipient, Robert's four years of involvement since the beginning of Venue's creation offers an insightful and comprehensive demonstration of the multitude of features the console includes. Having recently manned the FOH responsibilities on the North American Tom Petty and the Heartbreakers tour, he'll be bringing live tracks captured via Digidesign ProTools, along with personal tips and tricks for using PlugIns in a live situation.

In addition to owning MusiCanvas Recorders in Scottsdale, Arizona, Robert's past touring and studio involvement with other artists including Rush, Prince, Matchbox 20, Def Leppard and Jackson Browne have justifiably placed him at the pinnacle of professional audio engineers. Additionally, his involvement consulting with Neumann and AudioTechnica, as well as programming products such as the Alesis Q2, have afforded him proximity to the world's leading manufacturers and engineering departments. Many of those who caught one of his presentations at the recent AES convention in New York commented as to it being the highlight of the show.

The **Digidesign Venue** live sound digital console represents the first true product to offer recording studio performance in a purpose-built touring desk. Seamless integration of industry standard ProTools Plugins via a PC-based, ultra fault-tolerant redundant platform provides the highest degree of flexibility, sonic quality and reliability. Considered by many to be the most intuitive, ergonomically designed digital console, it represents Digidesign's long-term mandate to bring live and studio factions together to address the rapidly changing professional audio industries. Recent considerations by prime Canadian broadcast networks indicate a highly probable usage in TV and radio production as well.

Those wishing to preview the product or download the stand-alone software in advance of the presentation can visit www.digidesign.com/venue.

#### **Young Centre for the Performing Arts**

Designed by Thomas Payne of Kuwabara, Payne, McKenna, Blumberg Architects, the Young Centre is a 44,000 square foot performing arts, training, and youth outreach centre which will anchor the remarkable Historic Distillery District revitalization in downtown Toronto. The result of a partnership between Soulpepper Theatre Company and George Brown College, the Young Centre for the Performing Arts will provide a solution to the greatest infrastructural shortage in Toronto's cultural community – small to mid-sized performance venues, and rehearsal space.

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