

# AES Boston Section Newsletter

AUDIO ENGINEERING SOCIETY

FEBRUARY 1999

## Location recording draws music and acoustics enthusiasts to Faneuil Hall in January

By ERIC REUTER

Approximately forty members of both the Boston AES section and the Greater Boston section of the Acoustical Society of America (ASA) attended a joint meeting on 10 January at Boston's Faneuil Hall. The main event was a public concert by the Boston Classical Orchestra (BCO), which the AES and ASA had been invited to record using several experimental multichannel techniques. Following the concert, most members continued the meeting with dinner and a discussion of classical music recording.

For comparative purposes, three separate surround recording techniques were implemented, using a total of 16 microphones. Since the orchestra anticipated a sold-out hall, all microphones were suspended, keeping the floor and aisles free of stands and cables. Thanks to pre-rigged cables placed during the week before, the recording crew was able to set up in three hours before the concert.

The first microphone array consisted of four omnidirectional microphones hung in a trapezoidal pattern about four meters above the audience. The main pair was just above the first row of audience seating, spaced about one meter left and right of the center line. The rear

pair, four meters further into the hall, was spaced about two meters on either side of the center line.

The second technique was a coincident "quad-cardioid" microphone array built by Dick Campbell, consisting of four horizontal cardioid capsules oriented every 90 degrees, effectively creating four coincident pairs facing the front, rear, right and left. The array was hung about 2 meters behind the conductor and 3 meters above the floor. An additional cardioid microphone was pointed straight up for use as an overhead channel with these first two techniques.

The third approach was provided by guest Michael Godfrey, an independent researcher working with George Wong under a grant from the Canadian National Research Council. Godfrey brought a seven channel wireless "space sampling" microphone array of his own design, which was hung about 3 meters behind the conductor and 2.5 meters above the floor. Seven miniature capsules (one each for front left, center and right, surround left and right, overhead and low frequency) were mounted flush with the surface of a hard plastic dummy-head shape. Seven belt pack transmitters at the array sent the individual mike signals to receivers for amplification, mixing and recording. All

of the signals were routed through a Mackie console and recorded on a pair of synchronized Tascam DA-38s.

As part of a pre-concert lecture offered by the orchestra, engineer David Moulton spoke to the audience on the basics of surround sound and the recording techniques being employed. The concert itself, conducted by Steven Lipsitt, consisted of works by Mozart, Haydn and Schnittke, and the recording was overseen by David Moulton and Michael Crici. The Schnittke work should be especially interesting to hear in surround sound, as it concluded with the musicians roaming around the hall.

At dinner after the concert, BAES and ASA members were joined by BCO principal bassoon player Tom Stephenson (also of Emmanuel Recording), timpanist Dennis Sullivan and maestro Harry Ellis Dickson. Additional contributors were Bose acoustic engineer (and trumpet player) Jeff Hoefler and Torben Paulsen, a Danish researcher who is visiting Northeastern University and has extensively studied hearing loss in musicians.

Amongst a number of humorous anecdotes, the discussion focused on musical acoustics and performance issues as seen from the unique perspective of classical musicians.

Mr. Dickson shared a number of opinions, including the point that good recordings provide valuable income and prestige to orchestras and that players, and often conductors, don't know how an ensemble really sounds to an audience. Therefore, musicians are sometimes astonished to hear playbacks and may wonder out loud if they actually made that nice sound.

This was a very successful AES/ASA joint meeting and an example of how our respective societies can come together and enjoy a wonderful day of acoustics and audio engineering. A mixing session using these recordings will be the subject of a future joint meeting.

## Career Tracks: Search firm announces acoustical design opportunity in South

A major world-wide communications products company (Florida location) seeks an acoustical engineer to work in a creative group developing advanced acoustical technologies for radio communication products.

Candidates should either have an MS or PhD in acoustics or an MS in electrical engineering with a strong experimental background in audio transducers, circuit modeling and measurement meth-

ods, digital signal processing and psychoacoustics.

This position offers very attractive compensation, comprehensive benefits and an excellent relocation program. For immediate, confidential consideration, contact Guild Fetridge, Acoustical Search Associates, 560 White Plains Road, Suite 500, Tarrytown, NY 10591. Phone (914) 467-7851; FAX (914) 467-7847; E-mail GFAcoustic@aol.com.

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**Next Meeting:  
Tuesday, February 9**

**By MICHAEL FLEMING**

Join the Boston AES section on Tuesday, 9 February 1999, at GTE in Cambridge for a presentation by well-known acoustics and audio specialist David Griesinger.

A Boston resident, Griesinger has long been affiliated with Lexicon (Bedford, MA) as a design engineer and consultant. He is also an active recording engineer and a proponent of multichannel sound recording and reproduction.

Drawing on research that he has presented at recent AES conventions in Europe and the USA, Griesinger will speak about advanced surround sound systems and related issues regarding the reproduction of low frequency sound in rooms.

The results of many of Griesinger's experiments are reflected in the design of Lexicon's Logic 7 surround system, which allows five to seven discrete chan-

**An evening with  
David Griesinger**

Location: Newman Auditorium  
GTE (formerly BBN)  
70 Fawcett St.  
Cambridge, MA

Off Concord Ave., near the  
Fresh Pond Shopping Center and  
the Alewife T-Station.

Reception: 6:30 p.m.  
Meeting: 7:00 p.m.

nels of audio to be transmitted and stored in—and recovered from—a two-channel “stereo compatible” form.

Naturally, audio demonstrations will be part of the program.

We encourage anyone interested (AES members, non-members and friends alike) to attend. The presentation will be preceded by a half-hour social period. Refreshments will be provided.



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