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**AES 2008-2009
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Audio Engineering Society Chicago Section Meeting

Tuesday, April 21st, 2009, 7:30pm

High Quality Audio and the Internet Presented by Vicki Melchior

Location: Shure Incorporated, 5800 W Touhy Ave, Niles, IL 60714

Directions to Shure:

When arriving by car, approach from the east by heading west on Touhy, then turn right into the parking lot just east of the Shure building, which is on the corner of Touhy and Lehigh. Enter at the employee entrance on the east side of the building and register at the guard desk. A valid driver's license must be presented at the guard desk when registering.

[http://maps.google.com/maps?f=q&hl=en&geocode=&q=5800+W+Touhy+Ave,+Niles,+IL+60714+\(Shure+Incorporated\)](http://maps.google.com/maps?f=q&hl=en&geocode=&q=5800+W+Touhy+Ave,+Niles,+IL+60714+(Shure+Incorporated))

Dinner (optional) will begin at 6:30pm. Reservations required, contact Treasurer Mike Lester at lester_michael@shure.com by Monday April 20th. Sandwiches from Jimmy Johns will be provided. Price is \$10 for non-members and \$8 for members and students.

About the Presentation:

A period of rapid progression and dynamic change is underway in all areas of the music market at present, much of which is refreshing and has great potential, but the rapid evolution also leaves many of the more traditional branches in music trying to navigate choppy waters, seeking to adapt to current realities and simultaneously evolve new growth directions.

The internet and other means of electronic delivery are well suited to compressed audio for portable media, radio and tv, and are serving those rapidly proliferating markets exceptionally well. Less obvious however is how the distribution of high quality audio, both stereo and multi-channel, should proceed given the much higher bandwidths and network requirements for high quality audio, and the general retraction in the perhaps better-suited disc market. But the compromises of compressed low bit rate audio are typically inadequate for those interested in high quality sound, and whose focus is on higher quality home listening systems. In response, a proliferation of entrepreneurial approaches by small individual record labels, radio stations, and bands has begun. Far from failing, the

more far-sighted of these are finding means to exploit aspects of electronic distribution – e.g. loss of the distributor as middle-man, genre specificity, and high speed networks – to interact directly with their customers and try out new types of music exposure.

This lecture will discuss trends and the dynamic nature of changes over the last two years, technical requirements for the networked delivery of high quality audio, formats, what constitutes high(er) quality, the growth of download websites, and the potential and realities of streaming. Examples of successful approaches show off the advantages to music lovers of the directions now opening as things move forward.

About the Presenters:

Vicki Melchior received a Ph.D. from Yale University in Biophysics and did postdoctoral research in that field on crystallographic study of molecular structure. Joining M.I.T.'s Lincoln Laboratory in 1982, she spent the following 12 years at Lincoln and at Raytheon Missile Systems designing and analyzing digital and analog signal processing primarily for radar flight systems.

However -- owing to a continuous involvement from childhood up in music performance and then in audio, she also began hanging out at the Boston AES section while working in avionics, finally making the move to San Francisco in 1995 to work as senior engineer for Sonic Solutions on Sonic's professional mastering workstation. This was the period that saw the start of serious design efforts in high resolution audio, and while working broadly on workstation coding and processing, Vicki had the opportunity as well to focus on high res, designing among other things the high resolution sampling rate conversion algorithms adopted for the workstation. Subsequent work after Sonic included four years as principal engineer at National Semiconductor developing much of the audio dsp for National's DVD vlsi chips, which form the primary processors in many commercial DVD-A/V players and, continuing to the present, a consultancy in audio dsp that focuses especially on high quality audio algorithms, chip design, and audio/video integration for professional and consumer audio.

She has extensive background in high resolution audio at the AES, serving as vice chair of the High Resolution Audio technical committee since its inception in 2000, as a member of the DSP technical committee, and as chair of a new ad-hoc committee on Electronic Audio Delivery. She has organized and chaired a half dozen high res workshops at AES conventions, appeared as a workshop panelist, and also co-organized, together with Josh Reiss and Malcolm Hawksford, the 31st International Convention in London last year on High Resolution Audio.

Chicago AES Section **Meeting Report** **February 19th, 2009**

Jon Tatoes and Paul Isaacs presented "Sound-for-Picture Recording with File-Based Digital Multi-Track Recorders" on behalf of Sound Devices, LLC to approximately 60 members of the Chicago AES chapter. Jon Tatoes is co-founder and Managing Director and Paul Isaacs is a Principal Applications Engineer. Sound Devices was started in 1998 with a focus on sound-for-picture equipment. Jon began by discussing the need for equipment such as the Sound Devices 788T. A dual-system for with a video camera and sound equipment is typically used which

allows for multitrack recording. Multitrack recording is essential for unscripted reality-style production, live sound, surround recording and reduces the need for ADR. This requires timecode and a slate synch to allow post-production to easily piece everything together. Jon then discussed the new 788 and competition. All such devices record to WAV and Broadcast Wave (BWAV) file formats. WAV includes audio + metadata (sampling rate, bit depth, track count, non-audio information). BWAV includes all of this plus some specialized data for the sound-for-picture field including time code, editorial workflow and track names. The 788 can write to hard-drive, solid state drive (preferred!) and optical disc simultaneously. 788T panel presented showing controls, sync I/O, GPIO, CF slot, etc. Sound Devices decided to use the standardized Sony camera batter mount because of how common it is. Jon pointed out the interesting fact that in LA the fire marshal requires by law that no one is electrically tethered to anyone else, thus requiring all mics be wireless. Paul presented the Wave Agent software designed specifically for use in the sound-for-picture field. Wave Agent imports any WAV file and pulls out all metadata letting the user view and edit information such as track history and titles and has the ability to convert between mono and poly files. By visiting sounddevices.com/calculator one can access their online software to gauge the required memory for a specified recording time. The Chicago AES chapter would like to thank Jon and Paul for the interesting and informative presentation.

JOB OPPORTUNITIES:

Spoiled By Technology is a manufacturer's rep firm based out of Naperville IL and cover N IL and Eastern WI. They are looking for sales rep to add to their firm covering Contracting and Consultants. Please contact Moe Paulsen, VP Sales, at moe@btreps.com

Do you have a job opportunity you would like to publicize? Contact Section Secretary Ryan Scott at chicago.aes@gmail.com for more information.
