

Chairman's report 2021-2022

Graeme Huon

This is the Annual Chairman's report for the Audio Engineering Society (AES) Melbourne Section. AES Melbourne Section falls under the auspices of AES New York acting as an independent, not-for-profit Section.

It has been another challenging year, but we are pleased to report that we have been able to sustain a strong program of meetings of interest to our local members, both through online Zoom sessions, and, more recently with the resumption of face-to-face sessions.

We look forward to growing interest as we move to combine these two approaches next year. As we consider the inevitable, but slow, move back to in-person meetings, your Committee has considered how to serve the large following our Zoom meetings have attracted regionally, interstate, and internationally. We are currently exploring the practicality of mounting hybrid meetings involving in-person events which are live-streamed via Zoom to remote participants.

We are confident that this will form a part of our offerings to members and other audio professionals in the near future.

As Chairman I would like to thank the Committee for their continued effort in keeping Melbourne AES thriving, with particular thanks to our secretary Peter Smerdon for his hard work, dedication and leadership.

Lilith Lane has indicated that she will not stand for another term on the committee as her many other commitments do not allow time. We thank Lilith for her efforts on our behalf and wish her well in her future endeavours.

We were pleased to see Greg Segal in the committee nominations. Greg has been a valued contributor over the years and we would welcome him back

Meetings:

In the twelve months since the last AGM AES Melbourne has held six presentation meetings for members on topics of interest to general and new members alike. Meetings are generally open to the interested public, only being restricted to members when limits to attendance numbers apply. For Zoom meetings, attendees do need to register beforehand.

August 2021 meeting

Following the Annual General Meeting, Matt Harders of Amber Technologies gave a presentation on approaches to acoustic room treatments including Bass traps, absorptive, and diffusive treatments. Matt described such details as effective placement of absorptive and diffusive surface treatments and even the effect of paint finishes on acoustic treatment materials. The use of the Room Calculator for optimum panel configuration was described and examples given.

October 2021 meeting

On the 11th of October Joe Hayes of Vastigo Ltd gave what would be the first of two presentations on his new invention – DaS Aureality. Joe described the musical experience in terms of psychoacoustic effects and room influence logically leading to his invention that

tackled the Musicality of reproduced source material. Key concepts described included the influence, and the control of room reflections, the importance of critical bands to the cochlea, the dominance of pitch perception and blurring of pitch trains with coherent “spectral splatter”. Joe’s approach promised to address the challenge of difficult reproduction room acoustics in a simple, straightforward manner. Joe undertook to provide the necessary demonstration of his loudspeaker technology at a later time.

December 2021 meeting

In December 2021, Michail Barabasz of Lorantz Audio Melbourne gave an informative presentation on Loudspeaker Power Ratings that drew theory and practice closer and dispelled many myths. Michail is one of the few individuals worldwide who has both broad and in-depth knowledge of all aspects of loudspeaker design and manufacture based on extensive practical experience.

This presentation considered performance aspects including both mechanical and thermal effects were a critical problem for professional audio systems, especially for temperature rises during sessions, and especially for systems where ratings were exceeded, in some cases leading to irreversible failure or fire.

February 2022 meeting

AES75 - Measuring loudspeaker maximum linear sound levels using specialty noise.

In February, Merlijn Van Veen followed Mike Barabasz’ talk with information on the revised loudspeaker testing and rating approach using specialised test signals. The M-Noise test signal has been developed by the industry in conjunction with AES to better fit the peak and average nature of general program material. Pass-fail results obtained from these tests can consider linearity of the loudspeaker under test as would apply for real program material. The use of M-noise allows the determination of distortion-limited ratings as quickly as within 5 minutes, although longer-term soak testing is also required to take into account thermal effects. This approach should be a worthwhile adjunct to the existing AES soak testing regime where ratings are based on the sustained power rating leading to irreversible failure of 50% of the test devices – analogous to the LD50 ratings for living creatures no less!

April 2022 meeting

There are certain activities that require a direct personal experience and so cannot be delivered through online technologies. Audio listening tests fall in this category and so we were keen to get an opportunity to resume these experiences.

In April, Charlie Van Dongen of Involve audio in Mentone, Melbourne provided warm hospitality at his factory for a demonstration of his encoding and decoding equipment, amplifiers and multi-channel electrostatic loudspeaker system using his new format.

Involve Audio has been committed to every aspect of the system development from the intricacies of loudspeaker panel manufacture to amplifier design and perceptual encoding and decoding techniques.

The demonstration equipment included a 10-channel amplifier driving pairs of electrostatic panels in each of four surround loudspeakers according to Charlie’s new format. The theory explained in the previous (February 2021) session was then clearly evident in the demonstrations with expanded sweet spot and reduced sensitivity to listener location evident.

The quality of sound reproduction was also excellent, assisted no doubt by the use of compact and stylish electrostatic panels as loudspeakers.

Charlie had also previously described the many and varied 2-4 channel surround sound formats including stereo, HRTF, SQ, QS, Quadraphonic and ambiphonic/ambisonic (B) formats.

The decoding technologies and devices developed by Involve support all of these existing surround formats in flexible and convenient packages.

A bonus was a quick outline of Charlie's new Zenaji high-capacity battery storage technology offering increased life cycle and rapid charge-discharge for business and residual power requirements.

June 2022 meeting

In June, Joe Hayes returned in June to give the follow-up demonstration of his DaS AuReality invention at the SAE auditorium in South Melbourne.

Joe summarised some of the common difficulties with stereo and surround sound reproduction especially sweet spot restrictions and room reflections, outlined human perceptual aspects then summarised his approach and demonstrated two product instances of his technology in the room.

Joe had claimed that his patent applied for technology accurately preserved the spectral energy of the source material and this was certainly demonstrated. The omnidirectional nature of the sound from his loudspeakers (even 90 degrees off-axis), the maintenance of intelligibility at a distance and the general lack of a sweet spot were also more than adequately demonstrated.

Although the room (SAE auditorium) was well acoustically treated Joe explained that a more realistic and typical modern acoustically bright room would offer even better results, especially with control of reflections and room mode masking.

Committee meetings:

Your Section Committee has met three times in the 12 months to deal with the business of running the Section and planning the upcoming meetings. These meetings too have now moved from online sessions back to the more formal face-to-face meetings.

Identifying suitable meeting topics of interest to members remains a challenge. If you have any suggestions for guest speakers or topics you'd like discussed, we would be pleased to hear from you.

Online presence:

We have maintained our online presence with the regularly updated website, Facebook and Twitter account feeds and this is proving to gain attention worldwide and prove popular. Our online presence could benefit from members, friends or other interested parties with appropriate skills to assist in maintaining our reach in this particularly important aspect of our communication.

One particular need we currently have is the services of a Web Developer skilled in

WordPress to maintain and upgrade our website on an ongoing basis.

If you or any business contacts you know would be willing to help pro-bono, please contact me – or any other member of the Committee.

Membership:

The membership has suffered a slight decline, with 49 currently financial members. We also have the benefit of knowledge of 7 lifetime members of AES now, having remained members for 25 years. AES Melbourne remains keen to attract new members.

‘Legends’ series:

AES Melbourne has been progressing capturing the stories of local audio community individuals who have taken risks and made a difference. These are presented as summary stories and interviews on the website. We are always interested in uncovering stories from past and present members of the audio community in general.

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4 August 2022