

AES Technical Committee on Acoustics and Sound Reinforcement
Minutes from Technical Committee meeting – AES Fall Online 2021
Friday, 15 October 2021, 11am – 12pm (EDT), MS Teams

Attendance:

Adam Hill (chair) – AH, Kurt Graffy (chair) – KG, Neil Shaw – NS, Tom Bland – TB, Michael Lawrence – ML, David W. Robb – DW, Bob McCarthy – BM, Boris Rehders – BR, Marcel Kok – MK, Olushola Aremu – OA, Peter Mapp – PM, Tim Kuschel – TK, Tobias Goldmann – TG, Ugis Vilcans – UG, Charlie Hughes – CH, Etienne Corteel – EC, Francois Montignies – FM, John Woodgate – JW, Bob Lee – BL

Apologies:

Elena Shabalina – ES, Eric Ferguson – EF, Ben Kok – BK, Jon Burton – JB, Arica Rust – AR, Nathan Lively – NL, Steve Hutt – SH

1. Minutes and actions from AES 150 Show Spring 2021

- AH reviewed minutes from the previous meeting, highlighting raised actions. All actions were either completed or appear on the current meeting agenda.

2. AES 151 Fall Online 2021 – sessions supported by TC-ASR

- AH noted that there were no sessions that he was aware of that were officially supported by the TC.
- NS noted that George Augspurger will be giving a session entitled “Smaller, louder, smarter - loudspeaker design in the 21st century” on 24 October. This was a session discussed by the TC in the previous meeting.

3. AES 152

- Acoustics-themed sessions
 - AH noted that BK was willing to revive one of his tutorials on room acoustics.
 - PM offered to deliver a tutorial on large room acoustics (dependent on when/where the next convention is held), if BK wanted to cover small room acoustics.
 - KG has previously run a session focusing on how to distinguish between a small, medium and large room. This may work well to tie together the above two sessions.

- KG also suggested a session on active architecture, which would cover both acoustics and sound reinforcement.
- NS highlighted an ASA tutorial session from 2002 covering low-frequency acoustics in small rooms.
- PM suggested noise breakout/pollution, which would be a natural extension to a LF acoustics session.
- Sound reinforcement-themed sessions:
 - EC suggested a panel session on sound system standardization (follow-on from previous sessions). Possible contributors: Scott Sugden (SS), Eddy Brixon (EB), BR, BM, ML.
 - BR suggested a session on sound level weightings. BR and MK noted that a discussion on the appropriateness of A- and C-weightings would be useful. BM stressed the widespread misuse of A-weighting. NS reminded the TC that nearly all regulations use A-weighting.
 - MK suggested the session could make clear to attendees when each weighting curve is appropriate to use.
 - PM asked if it was time to reintroduce B-weighting?
 - MK, ML, BM, EC all expressed interest in taking part in a panel session on sound level weightings.
- Related to the above, JW highlighted current work IEC TC 29 is currently looking into measuring sound levels at low and very low frequencies. There are obviously problems with A-weighted measurements of low-frequencies outdoors (which propagate much further than high-frequencies).
- PM noted AES SC-04-09 (environmental noise) is looking at the areas mentioned by JW, so some collaboration should be explored between the relevant groups.
- TK noted that in Australia they are looking into C-weighting or C-A to estimate environmental nuisance. The 63 Hz band was of particular interest.
- MK noted that he's involved with a research project by the Dutch Government looking into dBC measurements on-site at dance music events.
- **Action (BK, PM, KG):** Agree on a set of acoustics-themed tutorials to deliver at the Spring convention and submit proposals, as appropriate.
- **Action (EC, SS):** Discuss potential for a panel session on sound system standardization with the above-indicated TC members and submit a proposal, as appropriate.
- **Action (BR, ML):** Discuss potential for a panel session on sound level weightings and submit a proposal, as appropriate.

4. Sound Reinforcement Conference

- AH noted that ES was now unable to take on chair duties for the next SR conference but had carried out initial work with AES HQ. The TC would therefore need to identify one or two members to take on co-chair duties. MK and ML expressed interest.
- The conference was tentatively set for 2023 in Germany, but the date and location could easily be changed at this stage.
- AH noted that once co-chairs were in place, the organization committee can be formed, where AH and ES were happy to contribute.
- *Post-meeting note:* EF expressed interest in joining the organizing committee.
- **Action (AH, ML, MK):** Discuss possibility of MK and ML acting as co-chairs. If agreed, build up an organizing committee and begin work with AES HQ.

5. Working groups, standards work, or other TC-related activities

- Noise control at live events
 - MK provided an update on the working group's activities. He detailed the two focuses of the group: (1) on developing a sound system performance index primarily focused on off-site LF radiation and (2) on developing a generalized live event sound level measurement protocol.
 - The group is currently conducting a literature review and will be meeting again in November. The target is to have some form of early output by the end of 2021 which will feed into an AES publication at a later date.
- Sound system standardization
 - BR reported that he had met with SS to discuss this working group, which will focus on identifying key metrics for sound system comparisons that are reliable and repeatable. On-site and off-site performance will be inspected.
 - BR raised the point that there are clear links to the noise control working group, so there should be communication between groups to ensure the work is aligned to each other.
 - BR also noted that the issue of sound system efficiency was of interest within this working group. How to give a good audience experience without annoying the neighbours? How can you achieve this with electrical efficiency? AH suggested bringing in James Hipperson (JH) to contribute to the efficiency aspects of the work and to also include EB due to his ongoing work in the area.

- AES Standards work related to recent Technical Document
 - AH noted that there had been no progress in this area since the last meeting. The efforts of the above-mentioned working groups would likely provide a natural bridge to AES Standards.
 - **Action (BR):** Add JH to the sound system standardization working group to contribute to the efficiency aspects of the research.
6. TC-ASR membership/leadership
- AH welcomed the two new members, Jos Mulder and David Williams, to the TC.
 - AH noted that there were no leadership changes since the last meeting.
7. Any other business
- ML mentioned his current research on debunking the myth that amplifier clipping causes blown tweeters and is happy for others to get involved. CH, BL and BM expressed interest.
 - AH gave an update to the TC on the ongoing work by the WHO's Make Listening Safe Initiative towards a Global Standard on Safe Listening Venues. AH, EC, MK and JM have been directly involved with this. The WHO is currently working on a draft of the standard, which sets very few numerical limits and focuses more on best practice in a number of areas including sound system design, venue acoustics, hearing protection and public awareness. AH will keep the TC updated on developments in this area.

Minutes compiled by AH, 20 October 2021.