

AES High Res Audio TC Meeting Notes – AES 149th Convention, October 29, 2020

Attending:

Josh Reiss
John Grant
Bob Stuart
Bob Katz
Oles Protsidym
Steve Hutt
Hyunkook Lee
Sohyeon Son
Matt Leatherman
David Rich
Maureen Droney
Vicki Melchior

These were discussion topics from the Zoom meeting, not strictly in order.

1. Bob Katz – paper summary.

Bob summarized his (well-received) convention paper on loudspeaker isolation. His measurements of loudspeakers standing on specific elastomeric supports demonstrated that loudspeaker vibrations are prevented from passing through to the floor, while the cabinets show the expected increase in vibration. <https://www.aes.org/e-lib/browse.cfm?elib=20942>

A different approach to vibration is that mentioned by Bob Stuart and used in loudspeakers designed at Meridian Audio, that use horizontally opposed drivers, resulting in cancelled vibration and inert cabinets.

2. Hyunkook Lee – paper summary.

Hyunkook summarized his convention paper on updates to his listening test tool. New inclusions are psychometric test methods, up to 64 channel playback, and binaural rendering with headphone EQ. One purpose of the test tool is the evaluation of high resolution in immersive and multichannel recording. <https://www.aes.org/e-lib/browse.cfm?elib=20919>

3. We should assemble a data base of Japanese papers on brain scanning studies (EEG,MMN) and make it available online, as there has been considerable work in the area. Some papers are in Japanese, although relatively good translators exist (e.g. DeepL).

4. Topics for HRA presentations for the spring 2021 convention (virtual)

Josh noted that the spring convention is the 150th. So we might do several individual events, or some form of grouped event around a theme, to generate 150th pizzazz ☺

Proposed events were the following:

a. Renewed consideration of the workshop on “What does Resolution Mean”. This was accepted but cancelled for last spring, then put off due to the limits of “virtual”

Attendees commented on the various definitions of high res, why high sample rates don't equate to best sound, provenance, and how both production and replay can deteriorate sound quality, independent of sample rate. A previously accepted tutorial on dither (Bob Stuart, Peter Craven) was cancelled until it can be done live, due to the need for sound examples.

b. Talk (tutorial) on brain scanning studies (EEG, Mismatch Negativity (MMN)) from Japan

Bob S. mentioned there are two centers of activity in Japan, at Osaka and _____. A virtual convention format is good for a Japanese presenter since it doesn't require travel.

c. Presentation from Bruno Putzeys on his software ASRC, and his methods of integrating drivers with amps (via current drive).

Current drive methods and Bruno's Kii loudspeakers may interest Steve Hutt's TC.

d. Loudspeaker design topics including what happens when polar responses aren't even.

e. Overview of progress, status, and marketing directions in high res audio

This is a fertile area and can be considered a number of ways. We haven't attempted this topic in years, and there has been lots of expansion of audio distribution in the last ~ 6 years:

Streaming (2 ch): Streaming services for HRA now include: Tidal, Qobuz, Xiami (China), Amazon HD (very spotty), Nugs Net, Primephonic, Bandcamp, and another from Japan.

Downloads: A lot of sources, including HDTracks, ProSoundMasters

Discs: Bluray and SACD/2ch-MQA and Multichannel. Bluray is a prime source for immersive HRA releases including Auro 3D, Atmos, and 5.1. Also there is MQA-CD (Japan especially).

Live stream broadcasting, including HD video and HD audio (especially OTT)

Gaming. At least a half dozen gaming headsets exist that do 96kHz and MQA.

IR/VR, and TV

The first three categories (streaming, downloads, discs) are staples of HRA, the last 3 (live streaming etc) are newly developing. Live stream broadcasting and gaming have a lot of interest in high resolution.

The meeting was adjourned but with agreement that we'll continue work on events for the 150th.