

- The meeting was brought to order by the past chair of the committee, David Josephson (DJ).
- DJ announced that we had no agenda for this meeting, other than to discuss the general purpose and direction of technical committee
- DJ introduced the new chair of the committee, Geoff Martin, who chaired the remainder of the session.
- The meeting was essentially a spontaneous brainstorming session regarding possible avenues for the committee to follow in the future.
- I (GM) have taken these ideas out of chronological order in the meeting and re-organized by topic.

Short history of the committee

- We have used the tech committee as a forum over the past years to discuss things that were of interest to the members
- Things we've talked about in the past included:
 - Standards processes
 - Education of microphone users
 - New developments in microphone technology
- It has, in the past, essentially been a place for a small number of people to get together and talk about microphone technology.

Role of the Technical Committee

- The TC has 2 roles
 - Suggesting and assisting in the creation of standards
 - Intuitive education

Standards ideas

- We don't have a standard "Road and Track Test" for microphones. Perhaps this is an area where we can contribute.
- One of the things that was discussed originally was that terminology regarding microphone specifications was difficult to interpret and that more meaningful specifications for the users are needed.
 - How do we create data and distribute it? Keeping in mind that we aren't restricted to paper
 - There has been a lot of interest, met with no resources, indifference and rejection. Manufacturers apparently don't like additional information being coupled to a microphone
 - This effort may have been batted back from the Standards Committee to the Technical Committee. Not all manufactures use the IEC standard on measurements.
 - Jim Brown has been looking at electrical interface areas and the RFI measurements. This could fold in as well.
 - Spatial behaviour of microphones

- ANSI standard coming for 3D polar plots for heading aids. Spatial sampling method is being developed. Siemens in New York S3 Working Group 48. Adding it to 3.22. David Preves in Minnesota.
- AES work in the same area happening now
- High frequency distortion in microphone
 - Poll the microphone manufacturers regarding any common unsolved problems that are of merit. HF distortion components that were reproducible but not yet quantifiable... Take a B&K large diaphragm mic and you'll get HF tambourine distortion products. Small diaphragm mic's do it less, dynamics don't do it at all.
- Near field polar patterns
 - This is particularly interesting for things like headset microphones. The Standards Committee has gone over this in the past. Each manufacturer chooses the most flattering test method for their product.
 - IEC 602-68
 - It's difficult to make a point source (but do you need it) when doing a nearfield measurement of a microphone.
 - This is also of interest to those in telephony
 - Directional vocal mic near a face. Understanding the diffuse field and polar characteristics would be interesting and surprising.
- Far-field response
 - This is not well understood.
- 3D-impulse response

Intuitive education and outreach

- People want to get a basic tool. Michael Williams pointed out that ORTF and NOS are just part of a larger general system. The microphone literature that is available is mixed. Maybe the TC or the AES could be a forum on a common basis.
- Ideas for educational software:
 - Listen though the off-axis impulse response of your mic - convolution box
 - Interactive programs and displays - i.e. proximity effect vs. distance - you move the fader and see the response change. Interactive CDROM?
- If the TC were to create a website that are of interest to consumers, then you go there instead of to the manufacturers website.
 - If we come up with useful things, then it might even get copied to the manufacturers sites.
 - History has shown that a good microphone doesn't necessarily have a perfect measurement.
 - If you're showing generic data and spec's then no one manufacturer gets offended. Everybody's mic's vary from the theory.
 - This may be of interest to the perceptual people. They may have some info on the relative importance of characteristics and preference.
- Ideas for educational material

- What do things sound like?
 - proximity effect
 - overload
 - off-axis response
 - wind and pop filter
 - vibration
 - membrane distortion
 - preamp distortion
- What does a pad fix?
- What happens when your wireless companders aren't lined up right? i.e. incorrect gains from transmitter to receiver.
- What does self-noise mean? Play things with different self-noise illustrating with different instruments. When do you care about this specification?
- There is a demo CD is available (maybe just wave files) from Ron Streicher - but it's synthetic. Emulating off-axis response.
- We talked about at some point, producing a format where all of these things could be combined in one view. One approach was that this could be a family of curves. Response at freq. distance, noise, distortion. Extra info could be added if it's a wireless microphone
- We should create a tiered program where the first things are the most basic.
- The challenge is always – how is this of value to the public? We need an outreach program
- Orchestrate tutorial workshops at conventions on specific subjects. Each presenter writes a short document on the topic which is inserted as a chapter in a continuing document on microphone technology.
- Teach people what they need to know and why they want to know it. Time to contact Berlin and San Francisco. Start assembling tutorials as part of the document.

Concentration

- Should we include newer microphones. Hands-free in cars. Different applications. Wind, noise, EMC, measurement techniques have to differ...
- We have to remember OEM microphones, active noise cancellation, hearing aids, telecommunication, array microphones. MEM's microphones
- We have to have a forum and official support where we can achieve people to do the work. What gets done depends on who is willing to do it.

Attendees

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