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AES Audio Engineering Society - Pacific Northwest Section

Around the Puget Sound, Seattle, Washington, U.S.A.

AES PNW Section

January Meeting Notice

**Dynamic Range - How LOW can you go?
(Or... What does soft mean, and what does loud mean?)**

**Presented by
JJ Johnston
Consultant
and
The AES PNW Section**

**Wednesday, January 29th, 7:30pm
Digipen Institute of Technology, VanGogh Auditorium**

[Directions to Digipen Institute of Technology](#)

What is Dynamic Range? Does it have anything to do with dynamic sound, or music? Aside from electronic and digital definitions of equipment performance, there doesn't seem to be much of a definition. Even in the measurement field, there are some issues regarding digital equipment, and the difficulty of determining an accurate measurement. Then again, is this constant across frequency? Ever used a tape deck, or an LP, or any equipment with a delta-sigma DAC or noise shaping, or even heavy feedback?

- In terms of what we hear, the situation is much more confused.
- Is dynamic range a short-term thing?
- Is it some measure of the recorded signal?
- Is it some measure of the loudest to softest parts of a track?

What is it? Well, it's not defined.

In this talk, we'll talk a bit about the measurement field and that will lead into a discussion of how one might characterize (not with one number, that never flies in the perceptual world) signal dynamics and dynamic range.

Along with this, a simple, not terribly inaccurate measure of loudness operating through [Octave](#) (software) will be introduced in order to make some approximate measurements of loudness as it would pertain to the present understanding of human hearing. Interestingly, this question ties in directly to the question of measuring instantaneous loudness vs. "mean level" in any perceptual sense, but that is an issue for Q/A.

Dave Tosti-Lane

AES PNW 2013-2014 Section Chair

n.b. *The material presented at our meetings is the opinion of the presenter and not necessarily that of the Society. You are encouraged to conduct your own research and to form your own opinions before adopting the presented material as Truth.*

Our meetings are open to anyone interested in Audio. AES membership is NOT required for you to attend our meetings.

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