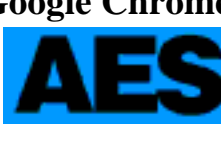


Google Chrome users: be sure to refresh your browser window to get the latest content.



Audio Engineering Society - Pacific Northwest Section

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

**NOTE: CHANGE IN VENUE  
MEETING LOCATION HAS MOVED!!!**

**AES PNW Section  
January Meeting Notice**

**The Fourier Transform  
AND  
ways to use it to measure, characterize,  
and correct for various audio system issues.**

**Presented by  
JJ Johnston (and others)  
of**

**The PNW AES Committee**

**9am-4pm, Saturday, January 28th, 2012  
Old Redmond Firehouse Teen Center  
Redmond, WA**

**NOTE: CHANGE IN VENUE... MEETING HAS  
MOVED!!!**

[Directions](#)

This will be a **FREE** all-day workshop/seminar, with breaks interspersed and a no-host lunch.

In the 9am-12pm morning session, JJ will explain what a Fourier Transform is, and what it's for, in *NON-MATHEMATICAL* terms. Then he will explain some of the ways that an FFT (that's Fast Fourier Transform) can be used to measure, characterize, and correct for various kinds of audio system issues, audio testing, and the like. The talk in the morning will use "Octave" which is a freeware package available from sourceforge, that runs on windows, linux, and OS-X.

We will show how to get this freeware and install it (although we won't do that in real time due to practical constraints). If you're anxious, the link is given below. We will set up a measurement system and show the Octave commands that can be used to run an actual room probe, and the like, in near-real-time by using the combination of Audacity (for capture) and Octave (for analysis).

We will discuss issues like windowing, time resolution vs. frequency resolution, and what "smoothing" in the frequency domain means in the time domain. The morning session will be somewhat of a hands-on lecture, as JJ, after showing the basics, will show how to do a variety of things in real time. The Octave scripts will be shown on the "big screen" next to the results they calculate. In short, you will get to see some of the processes that are going on inside of your various boxes.

This should easily take us to lunch, and attendees are welcome to either enjoy a BYOSL (bring your own sack lunch) or to go to one of the many fine eateries nearby. Given that you will need to drive to your lunch destination, we'll take an hour for lunch, which should be more than enough time.

In the afternoon, Bob Smith and Dan Mortensen will present an overview of acoustic measurement systems. The topic includes the basic signal flow for single and dual channel systems, system calibration and a more detailed comparison of measurement microphones. Then a number of commercial and free analysis systems will be discussed. Differences are highlighted between dedicated hardware, pre-integrated, DIY-integrated and complete DIY systems. Following the slide presentation, Dan Mortensen and Bob Smith will demonstrate several analysis systems in action including Meyer Sound SIM and SmaartLive v7. Time permitting one or two others may be briefly shown.

Be sure to refresh your browser window (F5 on windows, fn F5 on OS-X) to ensure you have the latest content.

**The software...**

You can view the site for Octave at: <http://www.gnu.org/software/octave/> and from that page, you can find the download site and download the version appropriate for your machine.

**The scripts and ppt decks**

Please download the script files so that you have them on your computer (if you are so inclined). Scripts are located at <http://www.aes.org/sections/pnw/scripts/>

**Nearby Eateries**

Downtown Redmond has the usual assortment of fast food places. There are also several different restaurants in the Bella Botega shopping center at the north end of town. Here is a [MAP](#) of the restaurants in the area.

**Walking Distance**

[Frankie's Pizza and Pasta](#) at the corner of 166th Ave NE and SR202/Redmond Way (walk)  
[Red Robin](#) 7597 170th Ave NE, Redmond. Burgers etc. You know the drill. (drive, or long walk)  
Kinishka, 16651 Redmond Way, Indian, across the street from Frankie's.

Mikie's Brooklyn Bagel & Deli, 16640 Redmond Way. Same side of the street as Frankie's. Bagels not that hot, deli said to be ok.

Spicy Talk Bistro, next door to Mikie's. Chinese. JJ's wife and Rick like this place.  
There is a McDonalds and Dairy Queen a bit further towards the SR520 Freeway.  
There is a Gyro place in the mall that contains the Value Village and Kinkos, which is right before you get to Mickey-D's.

**North part of town**

[Ooba's Mexican Restaurant and Grill](#) 15802 NE 83rd St. Redmond. Tacos al carbon, and other items. Tasty. (drive)

**Bella Botega Shopping Center**

[Marineopolis Sushi Land](#) A *kaiten* (conveyor belt) sushi restaurant. In Bella Botega. 8910 161st Ave NE, Redmond (drive)

Typhoon, Thai Restaurant  
Coho, American/Northwest theme.  
QFC and Tully's nearby.

**Redmond Town Center**

A bit further walk than Frankies, maybe another 1.5-2 blocks.

[Claim Jumper](#) Redmond Town Center. Large portions of comfort food. (drive)  
Matt's Broiler, across the parking lot from Desert Fire (upstairs).

**Dan Mortensen**

*AES PNW 2011-2012 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.**

2011-12 Officers

Chairman	Vice-Chairman	Secretary	Treasurer	Refer to the Officers and Committee contact list for contact information.
Dan Mortensen	Greg Mauser	Gary Louie	David Franzwa	

Program Committee

Committee 1	Committee 2	Committee 3	Committee 4	Committee 5	Committee 6	Committee 7	Committee 8	Committee 9	Committee 10
Bob Smith	Mark Rogers	Scott Mehrens	Steve Malott	Rob Baum	JJ Johnston	Rick Chinn	Dr. Ivan Tashev	Dr. Michael Matesky	Rick Senechal

Last modified 01/28/2012 19:35:16.