



Audio Engineering Society – New York Section

NEWSLETTER – MEETING NOTICE

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Tuesday January 12th, 2010
Join us for a Meet & Greet at 6:30pm
Presentation at 7:00pm

NOTE: Our New Venue
Hearst Corporation Tower
Joseph Urban Theater
300 West 57th Street
8th Avenue between 56th & 57th Streets

You must present photo I.D. at the Main Lobby AES Table

75th Anniversary of FM Broadcasting

Moderator:

David Bialik- DKB Associates

Panelists:

Steve Hemphill - Solid Electronics Laboratories

Herb Squire - DSI RF Systems Inc.

Scott Fybush - Northeast Radio Watch

and others to be announced

This year marks the 75th anniversary of Major Armstrong's first public demonstration of FM broadcasting. Major Edwin Howard Armstrong was one of radio's legendary figures. Inventor of super heterodyne and FM, the Major fought for years to enforce the patents on his creations, a struggle which lasted until his death in 1954. The panel discussion will look at Armstrong's legacy, including insights from several who worked with him and others who have worked tirelessly to keep his achievements in the public eye.

Steve Hemphill of Solid Electronic Laboratories and an Armstrong fan will discuss the Major's impact and his work.

Herb Squire of DSI RF Systems will examine why Major Armstrong's Yankee Network delivered a higher quality of audio than other networks of the day. Demonstrations will be played.

Scott Fybush editor of Northeast Radio Watch will look at some of the improvements of FM broadcasting since Armstrong.

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Report by James Williamson



L-R: Robert Auld, Adam Brecht, Scott Fybush, David Bialik, Herb Squire

On Tuesday, January 12, the AES New York Section honored Edwin H. Armstrong for his contribution to American entertainment: the invention FM radio broadcasting. David Bialik produced the meeting. Presenters included Herb Squire of DSI RF Systems and Scott Fybush of Northeast Radio Watch. Adam Brecht, nephew of Mr. Armstrong, read from a letter his Aunt Jean had written, remembering her fond memories as an employee of Mr. Armstrong. The event was very well attended by about 60 people and included interesting presentations on the history of FM broadcasting, from the early days of Armstrong's experiments, explaining his vision of FM as a wide-area, even national broadcasting system, through difficult times, where FM teetered on extinction, right up to present day where FM is competing with so many other forms of media.

Mr. Squire explained some of the early challenges that FM faced, not the least of which was finding high fidelity content to broadcast on this new, higher quality broadcast medium. Other issues discussed were the difficulties in distribution, (mostly via Ma Bell) and the fact that FM went through a similar transition as broadcast television, when the broadcast band was shifted and listeners had a lot of useless receivers!

Mr. Fybush then carried the timeline through the 1960's and beyond, discussing how FM survived through the use of sub-carriers. These broadcasts were composed of everything from WDDS (the dentist broadcasting system) to Muzak.

Today the consensus regarding FM is that narrow-band FM is not so advantageous in terms of noise reduction, but wide-band FM can bring great improvement in signal to noise ratio, if the signal is stronger than a certain threshold. Armstrong conducted the first large scale field tests of his FM radio technology at RCA's facilities on the 85th floor of the Empire State Building from May 1934 until October 1935. However RCA had its eye on television broadcasting, and chose not to buy the patents for the FM technology. Subsequently, Mr. Armstrong moved his operations to Alpine, New Jersey, where he had built a broadcast facility and began transmitting W2XMN from his 400-foot tower.

The question and answer period proved to be lively and interesting, with opinions expressed on everything from Dolby FM broadcast compression techniques to the history and experiences of engineers and listeners.