



2009 NAB Radio Show Engineering Program September 23-25 • Philadelphia, Pa.



This year's three-day Radio Show Engineering Program takes place at the Pennsylvania Convention Center, Philadelphia, and is part of the 2009 NAB Radio Show. The Engineering Program is a must-attend event for radio engineers and others who are interested in advances in radio technology, operating under emergency conditions, IP audio, computerized antenna modeling, preventing tower failures, and more.

The relaxed atmosphere of the NAB Radio Show allows you to ask questions, network with experts and peers, and spend quality time with exhibitors discussing your specific challenges and how they may help.

Here is the Radio Show Engineering Program schedule:

Wednesday, September 23

8:00 – 9:00 a.m. *Operating Under Emergency Conditions*

It can happen at any time. If you are serious about keeping your facility operating during an emergency, you will definitely want to attend this session. Steve Davis of Clear Channel Radio will offer advice and tips taken from actual situations in which engineers were called upon to keep their stations operating under the most adverse conditions. This information will be invaluable as you identify areas of vulnerability and create a solid emergency plan for your station.

Steve Davis, Senior Vice President, Engineering & Capital Management, Clear Channel Radio

9:00 – 10:00 a.m. *Tower Failures – How to Prevent Them*

Over the years, a very large amount of data has been gathered relating to tower failure mechanisms. Dave Davies from ERI will cover the major causes of tower failures and offer advice on how you can work to prevent a catastrophic situation. Hidden causes of failure, such as galvanic corrosion often go undetected and over time will weaken and eventually destroy a tower structure. Important detection methods will be identified that are both highly accurate and cost effective.

Dave Davies, Director, Structural Products & Services, Electronics Research, Inc.

10:00 a.m. – 12:00 p.m. *Planning, Building and Maintaining an IP-based Radio Facility*

The convergence of IT and radio broadcasting is upon us. Audio routing, mixing and distribution via Internet Protocol (IP) have become cost effective for both new installations and facility upgrades. In fact, IP audio will likely be pervasive in the broadcast plant within a very short time. Several manufacturers are embracing IP audio technologies, giving rise to useful equipment and systems.

Engineers:

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This IP audio workshop will cover what you need to know and demonstrate how you can plan, implement, and maintain an IP audio system in your facility. Learn how to design a system for redundancy and convenient troubleshooting. Plus, hear from others' first-hand experiences with IP audio implementation and maintenance.
Kirk Harnack, Executive Director, International Business Development, Telos-Omnia-Axia

12:00 – 2:00 p.m. NRSC Meetings

Meetings of the National Radio Systems Committee are open to radio broadcasters – primarily engineers – who want to participate in the development of standards and best practices for the industry. The NRSC is jointly administered by the NAB and CEA. The primary objective of the NRSC is to enhance and improve radio transmission and reception via existing and emerging technologies.

2:00 – 2:30 p.m. Electronic Program Guide Update

This update presents results of lab and field trials of an HD Radio™ Electronic Program Guide (EPG) ecosystem for U.S. AM and FM radio broadcasting (field trials are currently underway in the Boston, Mass. radio market). The results are part of a Phase 2 NAB FASTROAD project to develop the business requirements, system architecture and specifications of an EPG – an interactive on-screen guide to scheduled broadcast programming – suited to the HD Radio market for local broadcasters. Stations from the adjacent markets of Worcester, Mass. and Providence, R. I. were also involved, showing how an HD Radio EPG can serve listeners as they travel. In addition to over-the-air EPG services, the project team also developed web-based and mobile EPG solutions, which will all be discussed.

Moderator: **Rick Ducey**, Chief Strategy Officer, BIA Advisory Services

Panelists: **Skip Pizzi**, Consultant to BIA; **David Maxson**, Broadcast Signal Lab; **Adrian Cross**, Unique Interactive

2:30 – 3:45 p.m. Digital Think Tank Super Session

4:00 – 6:00 p.m. Opening Reception (Exhibit floor)

4:00 – 7:00 p.m. Exhibit Floor Open

Thursday, September 24

8:00 – 11:45 a.m. Measurements & Mathematics for the New AM Proof Rules

Ron Rackley and Ben Dawson will present three hours of intensive instruction aimed at helping station engineers and consultants alike understand practical application of the Method of Moments computer modeling techniques that may now be used for proofing AM DA patterns that meet certain requirements. Those requirements for “new rules” proofing will be explained and other factors that should be considered by all station owners who are interested in them will be discussed. The fundamentals of both Method of Moments computer modeling of the towers of a DA system and circuit modeling of tower base region and antenna tuning unit output characteristics will be explored in sufficient detail to prepare those who attend for preparing “new rules” proofs, if they have and understand how to use the necessary software.

Ron Rackley, Principal, du Treil, Lundin & Rackley; **Ben Dawson**, Principal, Hatfield & Dawson

11:45 a.m. – 1:45 p.m. Exhibit Floor Lunch

2:00 – 3:30 p.m. Practical Datacasting Today

Today, most stations are datacasting on RDS, HD Radio and even the Web. But what is next? How can stations use existing datacasting infrastructure to better serve and increase their P1s and help their advertisers' businesses grow? Jim Roberts will give an in-depth look at how stations can not only enhance their current datacasting efforts, but also reach out to listeners where they live and play, such as in social networks like Twitter and Facebook, as well as on mobile devices like the iPod, iPhone, Zune and more. He'll take a look at some real-life success stories in which stations are increasing spot ads using RDS text and reaching out to a younger demographic by “tweeting” contests and other information.

Jim Roberts, Datacasting Product Manager, BE

3:30 – 5:00 p.m. Exhibit Floor Closing Party

Friday, September 25

8:00 – 9:00 a.m. *New NRSC IBOC Mask Measurements*

The National Radio Systems Committee has published “NRSC-G201, NRSC-5 RF Mask Compliance: Measurement Methods and Practice.” This document is a guideline for broadcasters, manufacturers and others who need to understand the proper methodologies for measuring IBOC RF mask compliance. The workshop experts will explain the document and offer an opportunity for you to ask questions related to acceptable measurement practices and how these measurements can be best performed at your facility.
David Maxson, Principal, Broadcast Signal Lab

9:00 – 11:00 a.m. *The IBOC Power Issue – You Have Questions, We Have Answers!*

The controversial matter of IBOC (HD Radio™) power levels will be thoroughly aired in this panel session. NPR will report on a study developed and conducted by NPR Labs to determine the impact of elevated digital signal levels. With portable HD Radio devices now introduced in the marketplace, everyone wants consumers to enjoy the best possible digital performance indoors and outdoors. Broadcast equipment manufacturers will weigh in with various methods to effectively increase digital power to desired levels. If you are concerned about radio’s digital future, you won’t want to miss this session.

Moderator: **Milford Smith**, Vice President Radio Engineering, Greater Media

Panelists: **Geoffrey Mendenhall**, Vice President – Transmission Research and Technology, Harris; **Tim Bealor**, Vice President, RF Products, BE; **Mike Starling**, Vice President & Chief Technology Officer, NPR; **Mike Troje**, Sales Manager, Continental Electronics

11:00 a.m. – 12:00 p.m. *Historic & Otherwise Noteworthy Radio Facilities*

Scott Fybush lives, breathes, sleeps and eats North American radio and television. It's not always a very nutritious diet, to be sure. But for the last decade and then some, it's been his project to learn everything there is to know about the media - and then to try to make it better. In this hour, Scott covers some of his fascinating road trips that highlight the history of radio.
Scott Fybush, Radio Industry Observer, Writer, Consultant



12:00 – 1:30 p.m. NAB Radio Luncheon

For busy radio engineers, the NAB Radio Show is an excellent way to advance your technical education and maintain your edge in an increasingly competitive business.

Registration and updated information is available on the Radio Show website www.nabradioshow.com. See you in Philadelphia September 23-25!

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The advertisement is for the NAB Engineering Handbook. It features the NAB Store logo on the left, which includes the text 'Publications • Research'. The main text reads: 'NAB Engineering Handbook', 'A big thumper of an engineering resource... written by a list of veritable engineering all-stars.', and 'Buy at NABStore.com'. On the right, there is a small image of the handbook's cover. A quote from Radio World Online is also included: '-Radio World Online'.

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