

**ENNES REGIONAL WORKSHOP AT THE
GAB SUMMER CONVENTION**

Please complete and mail or fax this form back to GAB

Name: _____

Company: _____

Daytime Phone: _____

Email: _____

Address: _____

City/State/Zip: _____

Names of all in your party (for name tags)

Ennes Workshop Registration: \$60 to pre-register/\$70 at door

Please fax or mail this completed form to:

Kathy Haugen
Georgia Association of Broadcasters
8010 Roswell Road Suite 150
Atlanta, GA 30350
Fax: (770) 395-7235

Then call her with your Credit Card info or questions: (770) 395-7200

To register for other components of the GAB Summer Convention, visit the GAB website at www.gab.org

Ennes Educational Foundation Trust wishes to thank SBE Chapter 5 Atlanta and the Georgia Association of Broadcasters for hosting this Workshop and Fred Baumgartner, CPBE, CBNT, for moderating.

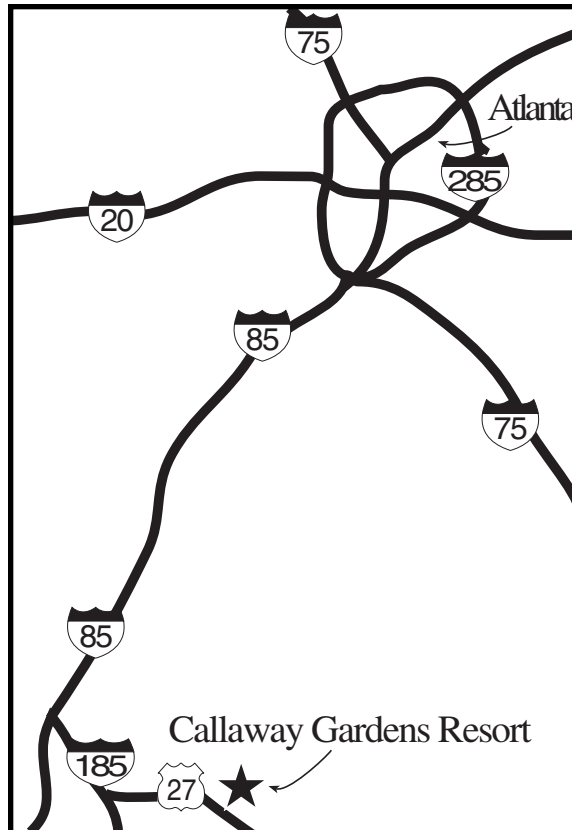
LOCATION

CALLAWAY GARDENS RESORT

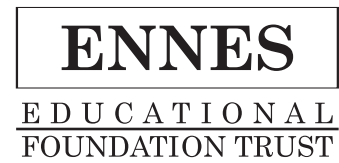
205 N. Cherry Ave., Pine Mountain, GA 31822
(706) 663-2281

Special Rate: \$89 per night for Thursday and Friday nights, plus tax, for SBE and GAB members. \$189 per night for Thursday and Friday nights, plus tax, for non-members. **Stay both nights and get Saturday night free!**

Directions from Atlanta: Take I-85 South to I-185 South. Take the US-27 Exit 42 toward Pine Mountain. Turn left onto US-27. Turn right onto West Harris Street. Turn left onto Cherry Avenue.



Society of Broadcast Engineers
9102 North Meridian Street, Suite 150
Indianapolis, IN 46260



Present the

**GEORGIA
ENNES
WORKSHOP**

**Continuing Education
for Radio & TV Engineers**

**Friday, June 8, 2007
8:50 AM to 5:30 PM**

*Callaway Gardens Resort
205 N. Cherry Avenue
Pine Mountain, GA*

**HELD IN COOPERATION WITH:
SBE CHAPTER 5
AND THE GEORGIA
ASSOCIATION OF
BROADCASTERS**

Society of Broadcast Engineers
9102 North Meridian Street, Suite 150
Indianapolis, IN 46260
(317) 846-9000
www.sbe.org

ENNES REGIONAL WORKSHOP

REGISTRATION 8 TO 8:50 AM

OPENING REMARKS 8:50 TO 9 AM

Moderator: Fred Baumgartner, CPBE, CBNT;
Ennes Trustee; Director Broadcast Engineering,
MediaFLO USA Inc.

JOINT SESSIONS

SESSION 1 9 TO 10 AM

CHANGES COMING TO EAS

Speaker: Clay Freinwald, CPBE, SBE EAS Chairman

The Emergency Alert System is about to undergo significant improvements and changes as it moves toward a more text-based system. New terms have been added to the EAS vocabulary: HazCollect, CAP, IPAWS, etc. This session addresses how these changes will affect broadcasters and what changes we may expect.

BREAK 10 TO 10:15 AM

SESSION 2 10:15 TO 11:15 AM

ENGINEERING CONSIDERATIONS FOR DIGITAL MICROWAVE STL, TSL AND ICR

Speaker: Todd Harrod, Alcatel-Lucent

Digital microwave radios play a crucial role in broadcasters' transition to DTV — allowing them to relay high quality digital program material between studios, transmitters, and remote sites. However, digital microwave links have different propagation characteristics than traditional FM BAS links. Impairments due to multipath as well as adjacent channel and co-channel interference can render a digital microwave signal unusable without aggressive countermeasures. Fortunately, the 30 year history of digital microwave has led to electronic technology and engineering design methods that effectively deal with these impairments and enable broadcasters to use digital microwave with capacities up to 155 Mb/s over long paths.

SESSION 3 11:15 AM TO 12 PM

TOWER SAFETY AND RESCUE

Speaker: James Heard, Electronics Research, Inc.

A climber suspended from his or her harness has a life expectancy between fifteen and twenty-two minutes, so having a rescue plan and training is extremely important on a tower project. This practical discussion of climber certification, fall protection, rescue planning and other safety related issues is intended to raise awareness of tower safety and to open a dialogue with idea sharing by all in attendance.

LUNCH 12 TO 1:30 PM

INCLUDES KEYNOTE SPEAKER

Major General William T. Nesbitt, Director of Homeland Security for the State of Georgia

RADIO SESSIONS

SESSION 4-R

IMPROVEMENTS TO FM AND HD SIGNAL QUALITY

1:30 TO 2:30 PM

Speaker: Clay Freinwald, CPBE, Nautel

FM HD Radio™ transmission, whether pure digital or hybrid (FM+HD), requires the use of a linearized transmitter to minimize the generation of intermodulation products during amplification of the HD signal. Even these transmitters have limitations to their linearity so to further reduce spectral regrowth, pre-correction techniques at the exciter level have been employed. With the hardware now available in these modern exciters coupled with their linear transmitter, it is also possible to add corrections for amplitude and phase variances introduced by the transmission system. The objective of this presentation is to demonstrate improvements that can be achieved to the FM broadcast signal, both analog and digital, by the use of pre-equalization at the exciter stage.

BREAK

2:30 TO 2:45 PM

SESSION 5-R

AUDIO OVER IP - IT'S NOT JUST THE FUTURE, IT'S A MUCH BETTER FUTURE

2:45 TO 3:30 PM

Speaker: Ken Skok and Jim Armstrong, Telos/Omnia/Axia

The sun never sets on the IP empire - this modest transport protocol owns the market for data networks worldwide. Infrastructure that once belonged to TDM-based systems is all migrating to packets. Routing and mixing audio and related data is moving to the IP world, too. Moreover, it's now practical to extend the LAN via IP-Radios for STL and inter-city relay applications. We'll explore and explain how IP networks are solving engineering problems in radio stations right now, and opening up new capabilities in every size facility.

SESSION 6-R

WORK BENCH TIPS AND GETTING A RAISE

3:30 TO 4:45 PM

Speaker: John Bisset, Broadcast Electronics

WORKBENCH TIPS — With well over 400 Workbench columns written and published in Radio World, B.E.'s John Bisset brings some of the best tips that engineers can use in their studio and transmitter plants to this presentation. Both beginner as well as seasoned engineers will benefit from the information that not only focuses on good engineering practice, but also problem areas to avoid, and ways to make the best use of time. John also discusses some techniques that can elevate the engineer in the eyes of the station owner, bringing job satisfaction while saving the station money.

GETTING A RAISE — In today's broadcasting environment, automatic salary increases are no longer "automatic". Management rewards those who help the bottom line, but how do you "sell" your abilities to station management? This presentation will review the steps an engineer needs to take to document engineering contributions, then make management aware of those contributions, how to ask for a raise, and if a salary increase is not possible, what kind of non-financial benefits are typical and can be negotiated.

SESSION 7-R

NETWORKING AND DATA TRANSMISSION FOR HD RADIO

4:45 TO 5:30 PM

Speaker: Terry Cockerill, Harris Corporation

As HD Radio evolves to a multi-media, multi-channel service, the challenges of implementation have shifted from the RF configuration to the networking side. This session will examine what the latest iBiquity software offers in terms of features and changes, and offer "best networking practices" guidelines to planning your system. Drawing from lessons learned in the field, some of the more common installation errors will be examined.

TELEVISION SESSIONS

SESSION 4-T

DIGITAL VIDEO AND TRANSPORT BASICS TUTORIAL

1:30 TO 2:30 PM

Speaker: Craig Beardsley, Leitch-Harris

This session covers the under-the-hood basics of today's digital Television and the processing, conversion, and distribution of video and audio for the modern broadcast station. Great for whether you've been in the business for years, or just learning your way.

BREAK

2:30 TO 2:45 PM

SESSION 5-T

DTV UPDATE

2:45 TO 3:15 PM

Speaker: Mark Richer, ATSC

This presentation will update attendees on current activities within the ATSC, with special emphasis on emergency alerting, advanced transmission technologies, mobile, and non-real-time services. The current status of the DTV transition will also be reviewed.

SESSION 6-T

MONITORING AND ANALYSIS OF MPEG VIDEO SYSTEMS AND A/78, THE ATSC RECOMMENDED PRACTICE FOR TRANSPORT STREAM MONITORING

3:15 TO 5:30 PM

Speaker: Rich Kaye, Triveni Digital

The transition from analog television to digital has changed the way that broadcast engineers monitor their signal. For many reasons, it is no longer enough to use a television or set top box to monitor a DTV signal.

The relative health of a digital television transport stream can be judged using an MPEG analyzer. However, it is not always easy to determine the impact on the viewer of an error detected in the transport stream. Certain compliance issues are much more likely to create problems than others. Broadcast Engineers need a guide to help them interpret the severity of the problems on their video distribution networks.

The ATSC published A/78, a Recommended Practice for Transport Stream Verification, to help broadcasters distinguish between service affecting faults, and non-service affecting faults. After a brief review of digital television, MPEG, and A/65 (PSIP), we will discuss digital television monitoring and analysis and A/78 in detail.