**ARCHIVED SESSION AVAILABLE**
Please visit the registration desk for information on how to access recordings of the sessions at this year's Symposium online.

**LUNCHEONS & RECEPTIONS**

**WEDNESDAY, 19 OCTOBER**
Box Lunch
Evening Welcome Reception sponsored by **HARRIS**

**THURSDAY, 20 OCTOBER**
Joint Luncheon with the Association of Federal Communications Consulting Engineers (AFCCE) sponsored by **NewTek - BE EMPOWERED.**
Manufacturers Reception
Hosted by SPX Communications Technology (Dielectric)
Co-sponsored by DSI RF Systems, ERI, Harris, Jampro, Kintronic Labs, Myat, Nautel, Shively, Stainless LLC

**FRIDAY, 21 OCTOBER**
IEEE BTS Awards Luncheon

**COFFEE BREAK SPONSORS**
Wednesday 10:30 AM and 3:30 PM:

**RICHLAND**

Thursday and Friday:

**Tieline Technology**

**COMREX**

**INOXTRONICS**

**WiFi PROVIDED BY**

**duTrell, Landin & Rackley, Inc.**

**PUBLICITY BY**

**TVTechnology**

**RADIO WORLD**

**IEEE**

**IEEE Broadcast Technology Society**

presents the

**61st Annual IEEE BROADCAST SYMPOSIUM**

19 - 21 October 2011
The Westin Alexandria
Alexandria, VA USA

**Technical Program**

Thank you to our Corporate Patrons:

**ERI ELECTRONICS RESEARCH, INC.**

**HARRIS**

**JAMPRO**
61st ANNUAL
IEEE BROADCAST SYMPOSIUM
TECHNICAL PROGRAM

WEDNESDAY, 19 OCTOBER

9AM Tutorial – Connected TV
Session Chairs: Rich Chernock – Triveni Digital, USA
Yiyan Wu – CRC, CANADA

1) Connected TV: The U.S. Broadcast Perspective
   Skip Pizzi – NAB, USA

2) Emerging International Standards for Internet
   Television
   John Simmons – Microsoft, USA

3) The Connected TV Technology Landscape
   Scott Lincke – Yahoo, USA

4) Dynamic Broadcast: Joint Optimization of
   Network Planning and Content Delivery
   Scheduling
   Junge Qi – Technical University Braunschweig, GERMANY
   Javier Morgade - University of the Basque Country, SPAIN

Noon Box Lunch
Speaker – John Luff – Television Technology Consultant
“Bridging the Gap”
Introduction by Ralph Hogan

1PM Tutorial – HD Radio Technology
Session Chair: Bob Surette – Shively Labs, USA

1) A Method for Measuring Hybrid FM IBOC
   Signals on Transmission Systems with
   Independent Digital and Analog Transmission Lines
   Randy Mullinax – Clear Channel Radio, USA

2) Power Measurement for HD and Analog FM Signals
   Lynn Strube – Bird Electronics, USA

3) Auxiliary Data Services for HD Radio – The Artist Experience
   Allen Hartle – Jump2Go, USA

4) The Business Side of HD Radio Technology
   Rick Greenhut – iBiquity Digital, USA

5) New FCC Part 74, 101 Rule Changes Affect
   Broadcast Link Design
   Larry Miller – Schwartz, Woods and Miller, USA
6) A Brief Review and Update on Environmental Due-diligence Requirements for Tower Siting
Kenneth Rosenbaum, Jr. – Environmental Resources Management, USA

6-9PM Wednesday Evening Welcome Reception
Sponsored by Harris Broadcast Communications
Entertainment provided by Da Vinci Strings

THURSDAY, 20 OCTOBER

8:45AM Welcome and Opening Remarks
Symposium Co-Chairs:
David Layer – NAB, USA
Paul Shulins – Greater Media, USA

9AM Radio Engineering & RF Infrastructure
Session Chair: Roz Clark – Cox Radio, USA

1) FM Transmitter Cooling Technologies and Tradeoffs
Gary Liebisch – Nautel, USA

2) Asymmetrical Sideband Broadcasting using FM HD Radio
Paul Shulins – Greater Media, USA

3) Report from Brazilian Association of Broadcasting about the Test Results in AM and FM Stations that use the IBOC Standard
Ronald Siqueira Barbosa, Valderize Donzelli – ABERT, BRAZIL

4) Efficiency Enhancement Technology for Linear RF Power Amplification
Geoff Mendenhall – Harris, USA

5) Tips and Tricks to make TIA-222-G Work for You
Adam Jones – Shively Labs, USA

Noon Joint BTS/AFCC/CE Luncheon
Speaker – Peter Doyle, Chief, Audio Division, Media Bureau, FCC
Sponsored by NewTek

2PM Network Distribution
Session Chair: James O’Neal – TV Technology, USA

1) Pitch Blue™: A Real Time HDTV Store and Forward Program Delivery System
Robert P. Seidel – CBS Television Network, USA

2) CBC’s Next Generation Converged Network
Pascal Marcoux – CBC, CANADA

3) Service Protection, Conditional Access and Digital Rights Management in Mobile DTV
Adam Goldberg and Robin Wilson – AGP, LLC, USA

4) Field trials for Advanced T-DMB Systems
Yun-Jeong Song, Young-su Kim, Hun-Hee Lee, Byungjun Bae, Kwang-Yong Kim, Joungi Yun – ETRI, KOREA

5) Parameters for Coverage Maps of ATSC Mobile/Handheld Digital Television
John Keen – NPR Labs, USA

6) Service Prediction Modeling for ATSC M/H
Bill Meintel – Meintel, Sgrignoli & Wallace, USA

6-9PM Thursday Evening Manufacturers Reception
Hosted by SPX Communications Technology (Dielectric)
Co-sponsored by DSI RF Systems, ERI, Harris, Jampro, Kintronic Labs, Myat, Nautel, Shively, and Stainless LLC

FRIDAY, 21 OCTOBER

8:30AM DTV Implementation
Session Chair: Charles Einolf – Consultant, USA

1) Taming DTV Interference to Co-Sited Adjacent-Spectrum Users
S. Merrill Weiss – Merrill Weiss Group, USA and Greg Best – Greg Best Consulting, USA

2) Single Frequency Network Experiences in NYC
Jerome David – Thomson Broadcast, USA

3) An Overview of the ISDB-T in Brazil
Leila C. C. De Biasi, Marco G. De Biasi, Marcelo K. Zuffo – University of Sao Paulo, BRAZIL

4) New Results for ISDB-Tg in the VHF Band
Gunnar Bedicks Jr., Renato de Mendonça Maroja, Francisco Suki, Edson Lemos Horta, Gustavo de Melo Valeira, and Cristiano Akamine – Mackenzie Presbyterian University, BRAZIL

5) HDTV and 3DTV Services over DVB-T2 Using Multiple PLPs with SVC and MVC
Cornelius Heilge, Estebaliz Guana Torre, David Gómez-Barquero, Thomas Schieltz, and Thomas Wiegand – Fraunhofer HHI/Technische Universität Berlin, GERMANY

6) Update on FCC National Broadband Plan
Bill Meintel – Meintel, Sgrignoli & Wallace, USA

Noon IEEE/BTS Awards Luncheon
Speaker – Sterling Davis, Recently retired VP, Engineering, Cox Media Group
“Up in the Air”

Friday afternoon continued on overleaf...
(…Friday afternoon continued)

2PM Future of DTV
Session Chair: Bill Hayes - Iowa Public TV, USA

1) Broadcasting – The Technology and the Medium
   Mark Aitken – Sinclair Broadcasting, USA

2) Reassessing Short-term Requirements for New Mobile Broadband Spectrum
   Steve Crowley – Steven J. Crowley, P.E., USA

3) Augmented Data Transmission for the ATSC Terrestrial DTV System
   Sung Il Park, Hyungsoo Lim, and Heung Mock Kim – ETRI, KOREA

4) ATSC 2.0 – What’s Next?
   Rich Chernock – Triveni Digital, USA

5) ATSC 3.0 - Next Generation Broadcast Television
   James A. Kutzner – PBS, USA

2011 IEEE BROADCAST SYMPOSIUM

This 61st Annual IEEE Broadcast Symposium, hosted by the IEEE Broadcast Technology Society (BTS), features technical presentations of significant, recent, and important technical topics of interest to engineers, scientists, consultants, and others in the field of radio and television broadcast technology. In addition to high quality technical papers, the symposium provides an excellent opportunity for attendees to discuss broadcast technology issues, ideas, and problems with their peers, manufacturers, broadcasters, and academic representatives.

REGISTRATION

Registration is required for admission to all sessions and is open to IEEE members and non-members. Those registered in advance may pick up their registration packets at the registration desk located in the lobby outside the ballroom. Paid conference registrants will receive a USB flash drive containing the conference record.

IEEE Broadcast Technology Society
445 Hoes Lane
Piscataway, NJ 08854 USA
Tel. +1 732 562 3906
http://bts.ieee.org

ARCHIVED SESSION AVAILABLE

Please visit the registration desk for information on how to access recordings of the sessions at this year’s Symposium online.

LUNCHES & RECEPTIONS

WEDNESDAY, 19 OCTOBER
Box Lunch
Evening Welcome Reception sponsored by HARRIS

THURSDAY, 20 OCTOBER
Joint Luncheon with the Association of Federal Communications Consulting Engineers (AFCCE) sponsored by NewTek
Manufacturers Reception
Hosted by SPX Communications Technology (Dielectric) Co-sponsored by DSI RF Systems, ERI, Harris, Jampro, Kintronic Labs, Myat, Nautel, Shively, Stainless LLC

FRIDAY, 21 OCTOBER
IEEE BTS Awards Luncheon

COFFEE BREAK SPONSORS

Wednesday 10:30 AM and 3:30 PM:

WiFi PROVIDED BY
duTrell, Lundin & Rackley, Inc.

PUBLICITY BY
TVTechnology
RADIO WORLD