

**2013
IEEE BROADCAST SYMPOSIUM
TECHNICAL PROGRAM**

WEDNESDAY, 9 OCTOBER

**9:00 AM – Tutorial – Future Television
Technology – Part 1 – Transmission Techniques**

Session Chair:
Rich Chernock – Triveni Digital, USA

- 1) **eMBMS/LTE**
Kent Walker – Qualcomm, USA
- 2) **DVB T2**
Andrew Murphy – BBC R&D, UK

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- 3) **CMMB-NGB-W**
Dr. Hui Liu – CMMB Vision, CHINA

12:30 PM - Box Lunch
**Keynote speech - Road to 4K Ultra HDTV
and the Bumps, Curves, Forks
and Potholes in it**
Dr. Ajay Luthra – Arris, USA

**2:00 PM – Tutorial – Future Television
Technology – Part 2 – Advanced Coding**

Session Chair:
Rich Chernock – Triveni Digital, USA

- 1) **HEVC Video Coding**
Dr. Yan Ye – InterDigital, USA
- 2) **Panel Discussion – Audio for Next
Generation Broadcasting**
Moderated by Dr. Deep Sen, Qualcomm, USA
Panelists: Jeffrey Riedmiller – Dolby, USA
Jean-Marc Jot – DTS, USA
Graham Jones – Fraunhofer, USA

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6-9:00 PM Welcome Reception
Sponsored by Sierra Automated Systems

THURSDAY, 10 OCTOBER

BREAKFAST SPONSOR – Shively Labs

8:30 AM – Welcome and Opening Remarks

Symposium Co-Chairs: David Layer – NAB, USA
Paul Shulins – Greater Media, USA

8:45 AM – Technology for TV's Future

Session Chair: Murat Karsi – TosiaComm, USA

- 1) **Point-To-MultiPoint-Overlay (P2MP) for
LTE-Advanced**
Frieder Juretzek – Institute for Communications
Technology, Technische Universität
Braunschweig, GERMANY
- 2) **Broadcast Enhanced Content Distribution**
Rich Chernock – Triveni Digital, USA
- 3) **Planning Factors for Cost Effective
Mobile Broadcasting: High Power-High
Tower versus Low Power-Low Tower**
Pablo Angueira – Bilbao Faculty of Engineering,
UPV/EHU, SPAIN

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- 4) **ATSC 2.0: What is it and how will it
benefit the broadcaster?**
Rich Chernock – Triveni Digital, USA
- 5) **Progress on "ATSC 3.0," the Next
Generation Broadcast Television System**
James Kutzner – PBS, USA
- 6) **Experimental Terrestrial Broadcasting of
4K UHD TV**
Young-Woo Suh – KBS, KOREA

Noon - Joint BTS/AFCC E Luncheon
Buffet on the terrace
Sponsored by Qualcomm

**1:30 PM – Keynote speech –
Separating TV Services from the
Platform - Today's Reality**

Mark Aitken – Sinclair Broadcast Group, USA

2:00 PM – Solutions for Today's Challenges

Session Chair: Joe Giardina – DSI RF Systems, USA

- 1) **Specifying and Measuring Passive
Intermodulation (PIM) Levels in RF
Components and Systems at Broadcast**

Power Levels

Merrill Weiss – Merrill Weiss Group, USA

- 2) **Broadcaster Implementation Of The ATSC
Mobile Emergency Alert Standard**

Wayne Luplow – Zenith, USA

- 3) **A study of medium wave isolator design
with quasi gyrator**

Dr. Kazuaki Wakai – Daiichi Institute of
Technology, JAPAN

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- 4) **Introduction of Voltage Sampling Units to
Facilitate the Method of Moments Proof of
Performance of Certain AM Directional
Antenna Patterns**

Tom King – Kintronic Labs, USA

- 5) **Artist Experience – Lessons Learned**

Paul Shulins – Greater Media, USA

- 6) **Quality of Experience in Adaptive Bit Rate
Streaming**

Prabhu Hosur – AT&T Labs, USA

6-9:00 PM Manufacturers Reception

Sponsored by
ERI, Harris, Jampro, Kintronic Labs, Myat,
RFS, Shively Labs, SPX/Dielectric

FRIDAY, 11 OCTOBER

8:30 AM – Technologies for Radio

Session Chair: Milford Smith – Greater Media, USA

- 1) **Technical Proposals for Revitalizing the
AM Band** - Steve Lockwood - Hatfield &
Dawson, USA

- 2) **MPX over AES: Digital Connectivity For
FM-Stereo**

Frank Foti – The Telos Alliance, USA

- 3) **AVB, Audio over Ethernet and Audio over
IP transport mechanisms**

Al Salci – Sierra Automated Systems, USA

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- 4) **The Effects of Nearby Structures on MF
Antennas and the FCC's Newly Enacted
Rules for Protecting AM Stations From
Those Effects**

Ben Dawson – Hatfield & Dawson, USA

- 5) **Audio over IP networks for the radio
broadcast studio: More than a interface
technology, it is the ecosystem**

Gregory F. Shay – The Telos Alliance, USA

- 6) **Opus: The Swiss Army Knife of Audio
Codecs**

Timothy B. Terribery – Mozilla Corporation, USA

Noon - IEEE/BTS Awards Luncheon
Buffet on the terrace
Sponsored by NewTek

**1:30 PM – Keynote speech –
Key Issues Facing Broadcasters Today**

Bob Zitter – Consultant, formerly with HBO, USA

2:00 PM – Spectrum Issues Worldwide

Session Chairs: Bob Plummer – NABA-TC Vice
Chair, USA, Peter MacAvock – EBU, Switzerland

- 1) **C-band Interference Panel**

Moderated by Bob Plummer – NABA-TC Vice
Chair, USA

Panelists include:
Winston Caldwell – Fox, USA
Jeff Watts – SES, USA

**COFFEE BREAK SPONSOR – Broadcast Supply
Worldwide**

- 2) **Spectrum Issues Worldwide**

Moderated by Bob Plummer – NABA-TC Vice
Chair, USA

Panelists include:
Doug Lung – NBC Universal, USA
Elena Puigrefagut – EBU, Switzerland
Bill Meintel – MSW, USA

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MEAL EVENTS & RECEPTIONS

WEDNESDAY, 9 OCTOBER

Box lunch

6-9PM

Welcome Reception

Sponsored by:
Sierra Automated Systems



THURSDAY, 10 OCTOBER

Continental Breakfast

Sponsored by:
Shively Labs



**Joint luncheon with the Association of
Federal Communications Consulting
Engineers (AFCCE)**

**Thursday 6-9 pm
Manufacturers Reception**

Sponsored by
**ERI, Harris, Jampro, Kintronic Labs, Myat,
RFS, Shively Labs, SPX/Dielectric**

FRIDAY, 11 OCTOBER

IEEE BTS Awards Luncheon

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2013 IEEE BROADCAST SYMPOSIUM

Co-chairs: David Layer – NAB, USA
Paul Shulins – Greater Media, USA
Virtual Event Chair – Tom Gurley – USA
Local Arrangements Chair – Murat Karsi,
TosiaComm, USA
Technical Program Co-chairs:
Roz Clark – Cox Media, USA
James Fang – USA
IEEE BTS President – Bill Meintel
IEEE BTS Administrator – Amanda Temple



BROADCAST SYMPOSIUM

The 2013 IEEE Broadcast Symposium, presented by the IEEE Broadcast Technology Society (BTS), features technical presentations of significant, recent, and important technical topics of interest to engineers, scientists, consultants, educators, regulators, and others in the field of radio and television broadcast technology. In addition to the high quality technical papers, the Broadcast Symposium provides an excellent opportunity for attendees to discuss broadcast technology ideas, issues, and problems, with their peers, manufacturers, broadcasters, and standards group 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 Versailles ballroom. Paid conference registrants will receive a USB flash drive containing the conference record.

ARCHIVED SESSION AVAILABLE

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



IEEE Broadcast Technology Society

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2013 IEEE BROADCAST SYMPOSIUM

Technical Program

9-11 October 2013

**The Westgate Hotel
San Diego, California USA**

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