

2018 IEEE Broadcast Symposium (BTS 2018)

**Arlington, Virginia, USA
9 – 11 October 2018**



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Program

Tuesday, 9 October 2018 (First Floor, Potomac Ballroom Salon A-C)

8:00AM CONTINENTAL BREAKFAST/REGISTRATION OPENS

8:45AM OPENING REMARKS

Disruptive Technologies in the Broadcast Space Session Chair - Dave Siegler, Cox Media Group

9:00AM Consumer Trends in Radio and TV, Brian Markwalter, CTA.....N/A

9:30AM A Cost Effective Solution to Provide Digital Television to Rural Areas, Villages and Terrain Difficult Areas using the TV-White Space, Frank Ebong, Cameroon Radio Television.....N/A

10:00AM BREAK

10:30AM Using Big Data to Regain End-to-End Control of QoE Out to the Consumer, Ted Korte, Qligent Inc.....N/A

11:00AM Broadcaster's Place in the Smart Speaker Ecosystem, Brian Savoie, National Association of Broadcasters.....N/A

Disruptive Technologies in the Broadcast Space (continued) Session Chair - Rafael Sotelo, Universidad de Montevideo

11:30AM Implementation of ISDB-Tb LDM Broadcast system on SDR Platform, Rafael Henrique Ignacio, School of Technology University of Campinas.....1

12:00PM Boxed Lunch, (First Floor, Potomac Ballroom Salon A-C)
Keynote Speaker - Poppy Crum, Chief Scientist, Dolby Laboratories

Disruptive Technologies in the Broadcast Space (continued) Session Chair - Rafael Sotelo, Universidad de Montevideo

1:30PM Electronic News Gathering Spectrum Sharing System (ENGSSS), Mark McHenry, Shared Spectrum.....N/A

2:00PM Internet of Things for Enabling Multi Sensoral TV in Smart Home, Maurizio Murrone, University of Cagliari.....6

Disruptive Technologies in the Broadcast Space (continued) Session Chair - Wayne Pecena, Texas A&M

2:30PM Broadcast- Broadband Experience in ATSC 3.0: Proposal for Gamification and Complementary Cameras, Rodrigo Admir Vaz, Samsung SRBR, and Pollyana Notragiacomo, Mackenzie Presbyterian University.....11

3:00PM BREAK

3:30PM 5G-Xcast – A Unified Framework for Common Content Delivery in 5G, Athul Prasad, Nokia.....N/A

4:15PM Pirate Radio and FCC Enforcement, Charles Cooper, FCC.....N/A

4:30PM CLOSING REMARKS

5:30PM-8:30PM EXHIBITS OPEN/WELCOME RECEPTION

(First Floor, Potomac Ballroom, Salon D)

Program

Wednesday, 10 October 2018 (First Floor, Potomac Ballroom Salon A-C)

8:00AM CONTINENTAL BREAKFAST/REGISTRATION OPENS

8:45AM Opening Remarks

ATSC 3 and UHD - Session Chair - Merrill Weiss, Merrill Weiss Group

9:00AM Setting Yourself Up for a Successful ATSC 3.0 Deployment,
Rich Chernock, BTS Distinguished Lecturer Chair.....N/A

9:30AM Wireless In-Band Distribution Link using LDM for SFN Transmitters
and Gapfillers in ATSC 3.0, Merrill Weiss Group.....17

10:00AM BREAK

10:30AM Field Comparison Tests of LDM and TDM in ATSC 3.0, Bo-Mi Lim, ETRI.....N/A

All Digital Radio - Session Chair - Paul Shulins, Burk Technologies

11:00AM Facility Upgrades/All Digital AM, Dave Kolesar Hubbard Radio L.L.C
and Mike Raide, Xperi.....N/A

11:30AM New Service Modes for HD Radio™ Transmission, Paul Peyla, Xperi.....22

**12:00PM BTS/AFCCE Joint Lunch, Sponsored By DAC System Sa -
(Fourteenth Floor, Grand View Ballroom) KEYNOTE SPEAKER:
Al Shuldiner, Chief of the Audio Division, FCC**

All Digital Radio (continued) - Session Chair - Paul Shulins, Burk Technologies

1:30PM PILOT All-digital FM Field Test Project, David Layer, National
Association of Broadcasters.....N/A

ATSC 3 and UHD - Session Chair: James O'Neal, Editor in Chief Broadcast Technology Society

2:00PM 4K HDR Workflow: From Capture to Display, Pablo Espinosa and
Toshiyuki Ogura.....37

2:30PM Extension to 4K resolution of a Parametric Model for Perceptual
Video Quality Estimation, Rafael Sotelo, Universidad de Montevideo.....46

3:00PM BREAK

3:30PM Planning your ATSC 3.0 Business and Deployment, Dave Siegler,
Cox Media Group.....N/A

Panel: Radio in the Connected Car - Session Chair: David Layer, National Association of Broadcasters

4:00PM Ben Poor, Digital Radio, EBU (Tentative), Joe D'Angelo and
Paul Brenner, NextRadio.....N/A

4:45PM CLOSING REMARKS

5:30PM EXHIBITS OPEN/MANUFACTURERS RECEPTION
(First Floor, Potomac Ballroom, Salon D)

Program

Thursday, 11 October 2018 (First Floor, Potomac Ballroom Salon A-C)

7:30AM CONTINENTAL BREAKFAST/REGISTRATION OPENS

8:15AM Opening Remarks

Broadcast Transmission Facility Design - Session Chair: Roz Clark, Cox Media Group

8:30AM Modern Remote Control and Monitoring for Broadcasters, Paul Shulins, Burk Technology.....N/A

9:00AM Protocols and techniques for transport reliability of FM and HD signals across IP Studio to Transmitter Links (STLs), Keyur Parikh, GatesAir.....N/A

9:30AM Designing a High Power Multi-Station FM Master Antenna, Dan Fallon, Dielectric.....N/A

10:00AM BREAK

10:30AM High Power Directional Waveguide UHF Balanced Combiner Design for Efficient RF Filtering and Combining, Emran Amin, RFS.....51

Next Generation TV- Session Chair: Stephen Lockwood, Hatfield & Dawson Consulting Engineers

11:00AM Nationwide Radio Coverage Prediction and Optimization for DVB-T2 in Nepal, Subdoh Nepal, Graduate School of Science and Technology Nara Institute of Science and Technology.....54

11:30AM The MSU NextGen Media Innovation Laboratory, Prabu David, MSU.....N/A

12:00PM BTS AWARDS Luncheon - (Fourteenth Floor, Grand View Ballroom) Keynote Speaker: Uma Jayaram, Managing Director, True VR Engineering, Intel Sports

ATSC 3 and UHD - Session Chair: Rich Chernock, BTS Distinguished Lecturer Chair

2:00PM ATSC 3.0 – WRAL's test station update/ The PHY layer – So many ModCods, so little time (aka apples vs oranges vs lemonade), Matt Brandes, WRAL-TV.....N/A

2:30PM Phoenix Project Update, Dave Folsom, Pearl.....N/A

3:00PM Dallas Project Update, Fred Baumgartner, Sinclair.....N/A

3:30PM BREAK

4:00PM Hacking ATSC 3.0, Wayne Pecena, Texas A&M.....N/A

Panel: FM Translators and Interference - Session Chair: Glynn Walden, Entercom Radio

4:30PM FM Translator Interference Panel Discussion, Sam Wallington, EMF, Martin Doczkat, FCC and Mike Cooney, Beasley Broadcasting.....N/A

5:15PM CLOSING REMARKS