ATSC 2021 NextGen Broadcast Conference

Washington D.C. • August 25-26, 2021
MAXIMIZING nextgenTV

Receiver Stack
Marketplace
Ad-Tech
OTT Synergies
App Designer
OSS/BSS

ash@gaiansolutions.com
+1 (415) 624-7431
www.gaiansolutions.com
Full Steam Ahead!

The board of directors and staff of the Advanced Television Systems Committee welcome you back for a return of our annual Member Meeting and NextGen Broadcast Conference. Whether participating in person at the Ronald Reagan International Commerce Center or via livestream, we welcome our members, government officials, and others to this annual event.

ATSC 3.0 is a platform for the future that ATSC members are continuously developing to help broadcasters stay in the front row for advancing technology. That’s one of the most important ingredients of the ATSC 3.0 standard – the fact that it is upgradeable to account for future developments in technology, business, and consumer demands.

ATSC 3.0 signals have been “on the air” in South Korea since 2017 reaching over 70% of households with Ultra HD video and next generation audio. Now with more than 150 local channels on the air in more than 40 U.S. cities, American viewers can choose to watch on any of the 70 new receivers currently available to purchase. All of those numbers are predicted to continue to grow in the months ahead.

Soon, we look forward to participating in the 2021 NAB Show and then the 2022 CES in Las Vegas. Our focus for both events will be to highlight the incredible assortment of consumer products that are now selling at retail and to talk more about the exciting capabilities of ATSC 3.0. We expect the ATSC Booth at both events to be a hub of activity about the standard and anticipate that several broadcasters and solution providers will join us to show off their progress with projects such as a uniform “broadcast app” and new services to entice viewers and deliver new opportunities for broadcasters.

The theme for this NextGen Broadcast Conference is “Full Steam Ahead,” which is exactly the right message for this time of new horizons for broadcasting.

Lynn Claudy
Senior VP of Technology, NAB
ATSC Board Chair

Madeleine Noland
President, ATSC
# Agenda

## Wednesday, August 25 Annual Member Meeting

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00PM</td>
<td>Registration and Exhibit Hall Opens</td>
</tr>
<tr>
<td>2:30PM</td>
<td>Welcome Remarks</td>
</tr>
<tr>
<td></td>
<td>- Lynn Claudy, Senior Vice President of Technology, National Association of Broadcasters, ATSC Board Chair</td>
</tr>
<tr>
<td></td>
<td>- Madeleine Noland, ATSC President</td>
</tr>
<tr>
<td>2:45PM</td>
<td>ATSC 3.0 as a Platform – New Developments and the Work Ahead</td>
</tr>
<tr>
<td></td>
<td>Host: Skip Pizzi, TG3 Vice Chair</td>
</tr>
<tr>
<td></td>
<td><strong>How a Tower Network can Facilitate SFNs and More</strong></td>
</tr>
<tr>
<td></td>
<td>- Tiffany Yu, Broadcast Business Development Manager, American Tower Corporation</td>
</tr>
<tr>
<td></td>
<td>- Louis Libin, Vice President, Spectrum Policy and Strategy, Sinclair Broadcast Group</td>
</tr>
<tr>
<td></td>
<td><strong>How a Core Network can Support Automotive/Vehicular Use Cases</strong></td>
</tr>
<tr>
<td></td>
<td>- Joe Chinnici, CEO, Signal Infrastructure Group</td>
</tr>
<tr>
<td></td>
<td>- Kerry Oslund, Vice President of Strategy and Business Development, Scripps</td>
</tr>
<tr>
<td>3:15PM</td>
<td>NextGen TV Logo Program</td>
</tr>
<tr>
<td></td>
<td>Moderator: Brian Markwalter, Senior Vice President, Research &amp; Standards, Consumer Technology Association</td>
</tr>
<tr>
<td></td>
<td>- Bob Campbell, Director of Engineering, Eurofins Digital Testing</td>
</tr>
<tr>
<td></td>
<td>- Lynn Claudy, Senior Vice President of Technology, National Association of Broadcasters</td>
</tr>
<tr>
<td>3:45PM</td>
<td>Our Future, Our ATSC</td>
</tr>
<tr>
<td></td>
<td>Moderator: Glenn Reitmeier, Founder, GlennReitmeier TV</td>
</tr>
<tr>
<td></td>
<td>- Jon Fairhurst, Principal Standards Engineer, Samsung Research America, Inc.</td>
</tr>
<tr>
<td></td>
<td>- Peter Riordan, Head of Worldwide Broadcast Go To Market Strategy, Media &amp; Entertainment, Amazon Web Services</td>
</tr>
<tr>
<td></td>
<td>- Peter Sockett, Director of Engineering and Operations, Capitol Broadcasting Company</td>
</tr>
<tr>
<td>4:15PM</td>
<td>Member Reception</td>
</tr>
<tr>
<td></td>
<td><em>Entertainment by the Howard University Jazz Ensemble</em></td>
</tr>
</tbody>
</table>

*Updates will be announced from the stage*
### Thursday, August 26  NextGen Broadcast Conference

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 8:00AM | Registration and Exhibit Hall Opens  
Continental breakfast                                                                         |
| 9:15AM | **Welcome Remarks**  
- Lynn Claudy, Senior Vice President of Technology, National Association of Broadcasters, ATSC  
  Board Chair  
- Madeleine Noland, ATSC President |
| 9:30AM | **ATSC 3.0 in Action**  
Susi Elkins, General Manager WKAR Public Media and Director of Broadcasting at Michigan State University |
| 10:00AM | **Receiving the Future - New Features, New Receivers**  
Moderator: Myra Moore, President, Digital Tech Consulting  
- Alfred Chan, Vice President of TV BU, Smart Home Business Group, MediaTek  
- Nick Colsey, Vice President, Business Development, Sony Electronics  
- Ellis Reid, Senior Brand Marketing Manager, Content Creation and Delivery, Dolby  
- John Taylor, Senior Vice President, Public Affairs, LG Electronics |
| 10:30AM | Networking Break – Sponsored by LPTV Broadcasters Association |
| 11:00AM | **Discussion with FCC Commissioner Brendan Carr**  
Facilitator, Madeleine Noland, ATSC President |
| 11:30AM | **You Can Take It With You: Mobility and Vehicular Developments**  
Moderator: Lindsay Shelton-Gross, Vice President, Membership and Marketing, Intelligent Transportation Society of America  
- Luke Fay, Senior Manager, Technical Standards, Home Entertainment and Sound Products, Sony  
- Bob Foster, President and CEO, Auton  
- Atheer Sabti, Global Video Solution Architect, Hewlett Packard Enterprise  
- Anne Schelle, Managing Director, Pearl TV |
| 12:00PM | Lunch and Networking – Sponsored by Synamedia |
| 1:30PM  | **Remarks from FCC Commissioner Nathan Simington** |
| 1:45PM  | **Distance Learning: ATSC 1.0 > ATSC 3.0**  
Moderator: Mark O’Brien, President and CEO, SpectraRep  
- Mark Aitken, Senior Vice President, Sinclair Broadcast Group  
- Sang Jin Yoon, Senior Vice President, Business Development, DigiCAP |
| 2:15PM  | **ATSC 3.0 Advanced Emergency Messaging**  
Discussion with Lisa Fowlkes, Chief, FCC Public Safety & Homeland Security Bureau and John Lawson, Executive Director AWARN Alliance |
| 2:45PM  | Networking Break – Sponsored by Signal Infrastructure Group |
| 3:15PM  | **We’re On the Air! - Now What?**  
Moderator: Anne Schelle, Managing Director, Pearl TV  
- Dave Brass, Vice President NA Strategy & Market Development, ATEME  
- Rob Folliard, Senior Vice President - Government Relations & Distribution, Gray Television  
- Mark Myslinski, Broadcast Solutions Manager, Synamedia  
- Sean D. Plater, General Manager, WHUT-TV |
| 4:00PM  | **Annual Recognition and Conclusions**  
- ATSC Board Chair Lynn Claudy  
- ATSC President Madeleine Noland  
- ATSC President Emeritus Mark Richer  
2020 Bernard J. Lechner Outstanding Contributor Award  
2020 Mark Richer Industry Leadership Medal  
2021 Bernard J. Lechner Outstanding Contributor Award  
2021 Mark Richer Industry Leadership Medal |

*Updates will be announced from the stage*
Speakers
ATSC is grateful for its global membership that supports our mission of developing and promoting broadcast standards. We would like to extend a special thanks to the many organizations (indicated in boldface, below) who have made a commitment as annual sponsors.

ABC
Access Advance LLC*
Advanced Television Broadcasting Alliance
AGC Systems LLC*
AGOS Co., Ltd.
Aircode
Alticast, Inc.
Amazon
American Tower Corporation LLC
Antennas Direct
Antop Antenna
ARK Multicasting
Arland Communications*
Association of Public Television Stations
ATBiS Co., Ltd
ATEME SA
AVATEQ Corp.
BitPath
BitRouter
Bonnie Beeman*
Brown Wolf Consulting LLC*
CAST.ERA
Cavell, Mertz & Associates, Inc.
CBC - Canadian Broadcast Corporation
CBS Broadcast Group
CleverLogic Co., Ltd.
Cobalt Digital, Inc.
Coherent Logix
Comark Communications LLC
Comcast
Communications Research Centre
Cox Media Group
Crown Castle
CTA – Consumer Technology Association
D2D Technologies
DirecTV
DekTec
DigiCAP Co. Ltd.
Digital Alert Systems a Division of Monroe Electronics
Digital Tech Consulting*
DirecTV
DISH Network
Dolby Laboratories, Inc.
DS Broadcast, Inc.
DTS
DTV Audio Group
DTV Consulting*
DTV Innovations
Duct Tape Engineering*
Edge Networks, Inc. (Evoca)
Eiden Co., Ltd.
ENENSYS Technologies
ETRI
Eurofins Digital Product Testing
Evoca
EW Scripps
Fincons Group
Fox Corporation
Fraunhofer USA
Gaian Solutions
GatesAir
GlennReitmeierTV LLC
Google LLC
Graham Media Group
Gray Television
Harmonic
Hearst Television, Inc.
Heartland Video Systems, Inc.
Hewlett Packard Enterprise
Humber Institute of Technology and Advanced Learning
IBM
IEEE – Broadcast Technology Society
IEEE – Consumer Electronics Society
Immersion Corporation
InterDigital Communications, Inc.
ION Media Networks
KAI MEDIA Co.
KBA - Korean Broadcasters Association
KNME New Mexico PBS
Leonard Laub*
LG Electronics
Linear Acoustic / Telos Alliance
LowaSIS, Inc.
LPTV Broadcasters Association Inc.
LTN Global Communications, Inc.
MaruEng. Co. Ltd.
MediaProxy Pty Ltd
MediaTek, Inc.
Meredith LMG
Merrill Weiss Group*
MIT NCRC
MSat Semiconductor, Inc.
NAB – National Association of Broadcasters
Nagravision
Nagra Kudelski
National Engineering Research Center – DTV
NBCUniversal
NCTA - The Internet & Television Association
NEC Corporation
Nielsen
News-Press & Gazette Company
Nexstar Media Group, Inc.
NHK
Novatek Microelectronics Corporation
OConsortium
ONE Media, LLC
One World Technologies, Inc.*
PBS – Public Broadcasting Service
Pearl TV
Philips International B.V. – IP&S
PIXTREE, Inc.
ProTelevision Technologies A/S
Public Interests Research and Communications, Inc.*
Public Media Venture Group (PMVG)
Qualcomm, Inc.
Quincy Broadcast Print Interactive (QNI)
Rohde & Schwarz
Saankhya Labs
Samsung Electronics America, Inc.
SBE – Society of Broadcast Engineers
SCTE
Shanghai Jiao Tong University
Sharp Electronics Corporation
Shenzhen TCL New Technology Co Ltd
Signal Infrastructure Group
Sinclair Broadcast Group
SK Telecom Americas, Inc.
Skip Pizzi Media Consultant LLC*
SMPT – Society of Motion Picture & Television Engineers
Sony
South Florida PBS
Strategy & Technology, Inc.
Synamedia
TEGNA
Telecommunications Technology Association
Televista
The Nielsen Company
The Osborn Engineering Company
Thomson Broadcast
TitanTV, Inc.
TMS Consulting, Inc.*
 Trilogy 5G, Inc.
Triveni Digital
Ubilinx Technology
UniSoft
University of the Basque Country (UPV/ EHU)
Univision
VBox Communications
Verance
Vertical Bridge
VideoFlow
V-Nova Ltd.
Waddell Broadcast Engineering Consulting LLC*
WideOrbit
WRAL-HD
Zenith Electronics LLC

*indicates ATSC Observer member
ATSC Board of Directors

**Lynn Claudy**  
*Board Chair*  
Senior Vice President of Technology  
National Association of Broadcasters (NAB)

**Ira Goldstone**  
Vice President, Next Gen Broadcast Solutions  
Cobalt Digital

**Dave Siegler**  
ATSC Corporate Treasurer  
Media Technology Consultant  
SMPTE

**Mark Aitken**  
Senior Vice President  
Sinclair Broadcast Group

**Dr. Jong G. Kim**  
Senior VP, LG Electronics and President, Zenith R&D Lab  
LG Electronics

**Peter Sockett**  
Director of Engineering  
Capitol Broadcasting Company

**Mark Corl**  
Senior Vice President of Emergent Technology Development  
Triveni Digital

**Brian Markwalter**  
*Board Vice Chair*  
Senior Vice President of Research and Standards  
Consumer Technology Association (CTA)

**Dr. Yiyan Wu**  
Principal Research Scientist  
Communications Research Centre  
IEEE – Broadcast Technology Society

**Jim DeChant**  
Vice President of Technology  
News-Press & Gazette Broadcasting

**Glenn Reitmeier**  
Founder  
GlennReitmeierTV LLC

**Jon Fairhurst**  
Principal Standards Engineer  
Samsung Research America, Inc.

**Anne Schelle**  
Managing Director  
Pearl TV

**Richard Friedel**  
*Board Vice Chair*  
Executive Vice President, Engineering, Operations, and Technology  
Fox Television Stations

**Andy Scott**  
Vice President of Engineering  
NCTA – The Internet & Television Association

ATSC Staff

**Madeleine Noland**  
President

**Jerry Whitaker**  
Vice President of Standards Development, ATSC Corporate Secretary

**Amy Lodes**  
Director of Communications
We create, innovate and lead for the benefit of everyone. That mission extends across many industry segments and is at the heart of our engagement with ATSC. We are proud to be platinum sponsors of the 2021 NextGen Broadcast Conference and are committed to our collective industry’s success.
ATSC 3.0 pioneer LG Electronics and its U.S. R&D Lab Zenith applaud the Advanced Television Systems Committee for hosting the 2021 ATSC NextGen Broadcasting Conference. We are proud to support the nationwide rollout of ATSC 3.0-enabled services with our award-winning lineup of LG OLED NEXTGEN TVs, 4K and 8K Ultra HD models ranging from 55- to 88-inch diagonal.
CELEBRATE 75 YEARS OF THE NAB BEIT CONFERENCE

Join us as we celebrate the 75th Broadcast Engineering and IT Conference at the 2021 NAB Show in Las Vegas, October 9-13.

Explore over 60 papers in sessions on Next Gen TV (ATSC 3.0), IP-based facilities, artificial intelligence and more.

Register today at nabshow.com
ATSC 3.0 test and signal acquisition solutions

DTA-2131
ATSC 3.0/1 SDR receiver for PCIe

Atsc3Xpert
ATSC 3.0 reception and analysis software

StreamXpert
Real-time stream analyzer for ATSC 3.0/1

DTA-2139C
12-channel ATSC 3.0/1 receiver for PCIe

Also available: USB-3 and PCIe ATSC 3.0/1 test modulators

(303) 318-4298
info@dektec.com
Discover ATEME’s Leadership in NextGen TV Rollouts


We’re creating a world where “what if” can become “what is.” Our infrastructure is behind the revolutionary technologies that are transforming the way we live, work and experience the world. With 25 years of experience and an unparalleled national portfolio of towers, small cells and fiber, we’re bringing the world’s biggest ideas and innovations to the people and businesses that need them.

www.ateme.com
We are here for you

ATSC 3.0 is the future of the broadcast industry. Talk to us about your deployment plans, and discover why Triveni Digital is the industry’s ATSC 3.0 expert and deployment leader

- Most extensive ecosystem partnerships
- Unified ATSC 1.0 and ATSC 3.0 solutions
- Quality Assurance products
- U.S.-based services and support

Triveni Digital: Serving North American Broadcasters for Over 20 Years

Look for ATSC in the “Future of Delivery” Pavilion at the 2021 NAB Show in Las Vegas, Central Hall 2959
Sony

BRAVIA XR A90J 4K HDR OLED Google TV™

Introducing Sony’s best-ever OLED TV, with awe-inspiring contrast and our brightest-ever OLED picture. The BRAVIA XR™ A90J OLED TV, powered by the all-new Cognitive Processor XR™, features next-generation technologies that redefine the viewing experience. Engineered for beauty inside and out, the A90J brings a premium, minimalist-inspired design that fits even the most sophisticated of aesthetics.

For more details, visit electronics.sony.com

1. 4K: 3,840 x 2,160 pixels. Upscaled, simulated and enhanced 4K images will vary based on source content. User must accept Google Terms of Service (http://www.google.com/policies/terms/), Play Terms of Service (https://play.google.com/intl/en-US_us/about/play-terms/index.html) and Privacy Policy (http://www.google.com/policies/privacy/) to use TV. User must connect to a Google account to use certain advertised features, including voice to activate linked apps, and install certain apps and operating software during setup. Use of TV without connecting to a Google account allows only basic TV features and certain apps. Wireless connectivity requires 802.11 home network (802.11n recommended). Network services, content, operating system and software of this product may be subject to separate or third-party terms and conditions and changed, interrupted or discontinued at any time and may require fees, registration and credit card information. Apps must be compatible with TV. App availability varies by region and device.

© 2021 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission is prohibited. Sony, BRAVIA, BRAVIA XR, Cognitive Processor XR, XR Triluminos Pro, XR Motion Clarity, BRAVIA CORE, and the Sony logo are trademarks of Sony Corporation. Google TV is the name of this device’s software experience. Google, Youtube, Youtube Music, Google TV and other marks are trademarks of Google LLC. All other trademarks are trademarks of their respective owners. Features and specifications are subject to change without notice. Screen images simulated.

Sony

verticalbridge

Owner of the largest portfolio of broadcast towers in the U.S.

Dedicated broadcast team with over 200 years of industry experience!

Joe Meleski, Vice President of Broadcast Leasing

(812) 430-3551  jmeleski@verticalbridge.com  verticalbridge.com
Launching the next chapter of quality...  

Through our continued partnership with CTA and NAB, the NEXTGEN TV logo test suite has undergone significant growth. The most recent release now has:

- 282 test cases covering 375 testable requirements of which 198 tests are approved for certification
- Includes MMT, Signed Applications and Signed Services, ESG, Content Advisory and Ratings, Advanced Emergency Alerts and Information, Application lifecycle, Multiple PLP, Audio Watermark
- Significant increased coverage for Immersive Audio, 4K and SHVC Video, Captions, and A/344 APIs
- Additional materials contributed by industry stakeholders, including NAB, NPG, Sinclair/OneMedia, Pearl TV, Sony, Dolby, Enensys, Verance

Arreios for ATSC 3.0 v1.6, the latest version of our automated test harness to support these materials and the A3SA DRM and Service Security test suite has also been released.

Contact digitaltesting@eurofins.com to find out more about how we assist you with conformance and interoperability of ATSC 3.0 devices in the market.

---

**BROADCAST + IT DONE RIGHT**

- Deployed for more than half of the US market transitions
- Virtualized Head-end System ready for download on AWS Marketplace
- Orchestration system for datacasting

---

**Comark Digital Services**

- INTEGRATION
- ATSC 1.0 / 3.0
- ENCODING

Sales@ComarkTV.com
www.ComarkTV.com

**Hitachi Kokusai Electric Comark LLC**

**HITACHI**

Inspire the Next
ATSC 3.0 Software for TVs and STBs
Portable to any SoC
Android or Linux
Certification services for

NextgenTV
Dolby AC-4
BitRouter

Your Broadcast Partner
Largest portfolio of broadcast communications sites in the U.S.
877-409-6966
americantower.com/nextgentv

America’s most trusted brand and highest performance for over-the-air TV transmission
Maxiva™ Transmitters with PowerSmart® Plus
- The industry’s best AC-to-RF efficiency
- ATSC 1.0 and 3.0 power parity
- Native IP connectivity
- Modular, compact architecture with the easiest maintenance in the market

GatesAir™
99 YEARS
N4527
www.gatesair.com/maxiva
The Lechner Award

The Bernard J. Lechner Outstanding Contributor Award is bestowed once a year to an individual representative of the membership whose technical and leadership contributions to ATSC have been invaluable and exemplary. The title of the award recognizes the first recipient, the late Bernard Lechner, for his outstanding service to the ATSC.

Lechner was the retired Staff Vice President, Advanced Video Systems of RCA Laboratories. His 30-year career at RCA covered all aspects of television and display research, including early work on home video tape recorders in the late 1950s, extensive development of flat-panel matrix displays in the 1960s including pioneering efforts on active-matrix liquid crystal displays, advanced two-way cable TV systems and pay-TV systems in the early 1970s, electronic tuning systems and CCD comb-filters for TV receivers in the mid-1970s, automated broadcast cameras and CCD broadcast cameras in the late 1970s and early 1980s, to HDTV in the mid-1980s.

The Richer Medal

Named for the legendary former ATSC president who led the organization for two decades spanning both ATSC 1.0 and ATSC 3.0, the Mark Richer Industry Leadership Medal recognizes an individual or team that demonstrates exemplary leadership in advancing the mission of ATSC and epitomizes the vision, tenacity and leadership qualities that were the hallmark of his leadership.
A leader in global polytechnic education, Humber College provides career-focused education to more than 33,000 full-time and 23,000 part-time and continuing education students across three campuses in Toronto, Canada.

Housed in the 93,000-square-foot Barrett Centre for Technology Innovation at North Campus, the core mission of the Broadcast–Broadband Convergence (B²C) Lab is to advance ATSC 3.0 technology and 5G convergence research, development, testing and deployment – creating new innovative broadcast television experiences and datacasting applications supporting a host of industries and new business models.

Humber’s B²C Lab will be the first of its kind in North America equipped with both an ATSC 3.0 broadcast ecosystem and 5G core network, including an RF antenna test chamber supporting over-the-air testing of a wide range of wireless devices and prototypes.

Learn more about the Humber B²C Lab
b2convergence.ca

For more information, contact Orest Sushko, Director B²C Lab orest.sushko@humber.ca
TV’S NEXT BIG THING IS COMING FASTER THAN YOU THINK.

NEXTGEN TV IS ON TARGET TO BE IN 60% OF HOMES BY THE END OF 2021.

Consumers demand the best in entertainment — and NEXTGEN TV delivers. Stunning video features sharper images and deeper contrast. And Dolby Audio System’s enhanced audio technology keeps volume consistent across channels, boosting dialogue so you hear every word. With LG, Samsung and Sony already manufacturing 50+ models, and hundreds of local broadcast stations on board, the momentum is building.

Make sure your retail locations can keep up. Learn more at: WatchNEXTGENTV.com
Thank you for your support

Samsung gives a heartfelt thank you to all who contributed to the strong rollout of new broadcast services during the past, challenging year. We are honored to work with you for the success of NEXTGEN TV.

©2021 Samsung Electronics America, Inc. Samsung is a trademark of Samsung Electronics Co., Ltd. Screen images simulated.