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**ATSC 3.0 'NextGen TV' Makes Its Debut At The 2020 CES**  
*Details on p. 7*

# President's Message

## Ralph Hogan, BTS President



Welcome to this issue of **Broadcast Technology**.

As we begin a new year, the Broadcast Technology Society will be providing new opportunities for its members. One of these is a webinar information and training program for members of the Society. Industry experts will provide timely content which can be used to gain knowledge or expand existing skills. Topics to be covered will provide interest from all areas of the Society. The program will start in the first quarter of 2020. We have expanded coverage of the **Broadcast Technology** publication to include topics/coverage of international events and additional contributions from membership. If you have a project or subject that would be of interest to BTS members please let our **Broadcast Technology** editor, James O'Neal, know about them, as he is always looking for content to share in the publication. He may be contacted at [ieeebtseeditor@gmail.com](mailto:ieeebtseeditor@gmail.com).

BTS will be joining the 5G MAG organization in January 2020. I attended the Sept. 13 launch event at the 2019 Amsterdam IBC Show along with several AdCom mem-

bers. At that meeting there appeared to be a number of organizations expressing a desire to join, including those involved in providing professional equipment, handsets, broadcasters (pay TV, commercial, and public), along with some network operators (including the existing broadcast network operators), the European Space Agency and some regulatory institutions. The first 5G MAG meeting was organized by EBU Technology and Innovation group (TI), and this new organization will be set up as a Swiss association similar to the DVB or HBBTV. Since there is a broadcast component in the 5G specification, there may be future opportunities for BTS members to contribute to the development of forthcoming technologies from this group.

I am also pleased to report that the Broadcast Technology Society hosted a first-ever "Women in the Industry" breakfast as part of the fall IEEE Broadcast Symposium held last October in Hartford, Connecticut. The Broadcast Technology Society was delighted to take the opportunity to recognize the accomplishments of women in the broadcast industry and to encourage collaboration of these experts and the Society. The keynote speaker at the breakfast event was Jaclyn Pytlarz, who is senior engineer at Dolby Laboratories, and was featured in the fourth quarter, 2019 issue of our **Broadcast Technology** publication. Everyone present at the event thoroughly enjoyed Jaclyn's presentation, and planning is now already underway for the next such breakfast event at the IEEE 2020 Broadcast Symposium.

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### Newsletter Deadlines

**Broadcast Technology** welcomes contributions from its members. Please forward materials you would like included to the editor at [BTSEditor@IEEE.org](mailto:BTSEditor@IEEE.org). Here are our editorial deadlines for upcoming issues:

Issue	Due Date
Quarter 2	Apr. 3, 2020
Quarter 3	June 28, 2020
Quarter 4	Oct. 31, 2020
Quarter 1	Dec. 31, 2020

# From The Editor

## U.S. ATSC 3.0 Finally Debuts At The CES, A New Decade With New Challenges

By James E. O'Neal, Editor-in-Chief,  
BTS Life Member



It's taken a long while to happen, but it appears that ATSC 3.0 has finally made a formal entry in the United States with the showing of 3.0 (Next Gen TV) sets at the early January Las Vegas CES. (Yes, I know that broadcasters, especially Sinclair, Capitol, and the Phoenix Project collective have been promoting this technological whiz kid for some time, but as they say, "if a tree falls in the forest and there's no one there to hear it, does it make a sound?" It's great to have 3.0 signals radiating out into free space courtesy of these and other forward-minded broadcasters, but without TV sets that can do something with the Next Gen TV signals, there isn't really much of a "sound.")

ATSC 3.0 has been available in tantalizingly small "sips" for a number of decades now, with OTA transmissions and reception at vendors' exhibits, and there was even a champagne toast to the completion and FCC adoption of the standard at the 2018 CES; however, as I reported last year, the exhibit halls were strangely devoid of anything 3.0-wise then and this was also the case at the 2019 show.

Fortunately, the U.S. version of the standard has now been sufficiently "locked down" to encourage receiver manufacturers to construct prototypes and tool up for production quantities, the first of which should be available sometime this spring according to information provided by representatives of the three NextGen TV set producers (LG Electronics, Samsung and Sony) exhibiting at CES. Curiously, there was not a lot of publicity about set availability from these manufacturers. LG did announce the arrival of Next Gen TV sets at their Monday (Jan. 6) press event, but no mention was made of Sony's U.S. 3.0 offering at their press conference, which took place the same day.

Even though participation by set manufacturers was disappointing (Sony's NextGen set was not located at their large exhibit, but rather at the ATSC booth some distance away in Central Hall) this is at least a start in rolling out the new TV experience on the North American continent. Getting ATSC 3.0 to the U.S. marketplace has been a long haul, but it would appear that we're now starting to make it over the set availability hurdle. Congratulations to all who've been involved in this monumental effort to get Next Gen TV into North American homes!

### A New Decade Arrives With Plenty Of New Challenges

It's now officially the year 2020, believe it or not, and if you're like me—a "baby boomer" who was born in mid-20th century—you may still be having trouble getting used to starting dates on checks and other documents with "20" instead of "19" even though you've had two decades to practice and reconcile yourself to a new millennium. I'm a science fiction aficionado, and recall during my teens, twenties, thirties, and even forties, how impossibly far into future the year 2000 sounded. I was one of those who viewed Stanley Kubrick's "2001: A Space Odyssey" when it premiered in 1968 (I was in college by that time), and thinking that 2001 was an impossibly long way off. Well, as we all know, it did arrive, but not quite in the fashion that Kubrick depicted—no Pan Am (remember that airline?) passenger service to the moon, no Howard Johnson lodging once you got that satellite, and no real AT&T "picturephone" pay station service for connecting with loved ones back on Earth either (although you can now "Skype" video through your AT&T smartphone account).

Just as with ATSC 3.0, it seems we're on the verge of the arrival of some new technological wonderments. After all, both Boeing and SpaceX are aggressively working to make space travel available to non-astronauts, and with the way Marriott has been acquiring other hotel brands during the past several years, there just might be a "Residence Inn" or "Courtyard" constructed a quarter of a million miles or so away from my home during my lifetime, just in case I should have a need for temporary lodgings that far away!

The way we live and move about has changed greatly since I arrived in 1947, and some of these changes have been greatly accelerated since we entered the 21st century. Focusing on the broadcast world, virtually all of the world now has access to digital television transmissions, analog has just about completely disappeared from broadcast and teleproduction facilities, videotape and "film islands" have gone the way of the dinosaur, IP connectivity has edged out its precursors in radio and seems destined to do the same in television, and we've arrived in a world where more and more video content is being consumed on handheld other-than-TV-set devices, and streaming seems to be edging out over-the-air delivery of this content. It's also a very strange world (to me at least) where AM radio is struggling for its very existence, FM listenership—while still good in many parts of the world—is being augmented (and in some places) completely replaced by OTA data streams that convey speech and music, and many (especially the "Millennials" and "Gen Zs" aren't aware that

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