



IEEE

# Broadcast Technology

The technologies to deliver information and entertainment  
to audiences worldwide, at home and on the go

*5G Wireless Broadband Continues  
To Roll Out: How Might It Impact  
Conventional Broadcasting? – p. 28*



# President's Message

## Ralph Hogan, BTS President



It is time to get out and about if you have not already done so. After two years of being restricted because of the pandemic, many are ready to try to resume some level of normalcy in their life. Along with this thought some members are ready to resume social interaction with face-to-face gatherings. 2022 may be the year we start that process.

More and more face-to-face meetings and conferences are slowly starting after two years of hiatus due to Covid-19 and its variants. The following programs of interest are planned for 2022:

- IEEE International Symposium on Broadband Multimedia Systems and Broadcasting in Bilbao, Spain, June 15–17
- IBC in Amsterdam, Netherlands, Sept. 9–12
- BTS Annual Broadcast Symposium in Florida, USA, Oct. 18–20

International travel is also starting to pick up, so more international visitors may be traveling to these conferences. Some conferences keep a virtual component to serve those

who can still not travel. For those that can safely travel, I encourage you to attend one of our conferences.

BTS will also have its virtual Pulse Technical Program on June 12–13, 2022. If you have missed past Pulse Events, on-demand videos are available in the BTS Resource Center (<https://resourcecenter.bts.ieee.org/>).

To make these conferences and virtual events successful it is important that individuals attend them. We have not had a good track record of attendance from BTS members. Not all events cover topics of interest to everyone, but it is important that we have a reasonable attendance. Since these events are a major source of revenue for BTS, it has an impact on successfully scheduling sponsors and retaining presenters for future presentations. I would encourage you to sign up for BTS events, they are all informative and may provide information and knowledge that you can use now or in the future.

The BTS website is currently going under an upgrade. We are looking for volunteers to help with this process. Even if you cannot help directly, any ideas that you may have on improving the site will be appreciated. If you are interested please contact Margaux Toral at [bts@ieee.org](mailto:bts@ieee.org).

Finally, The IEEE Broadcast Technology Society is seeking nominees for the Administrative Committee (AdCom) election. Any member of the BTS in good standing is eligible for election to the AdCom. Elected officers will begin their three-year term on Jan. 1, 2023.

There are specific areas where we're looking for volunteers to serve for the 2023–2025 term including Fellows, Education, Standards and Strategic Planning. These society chair/committee roles as well as all others can be found here: <https://bts.ieee.org/about-bts/adcom-officers/society-chair-roles.html>

Serving on the AdCom is a great opportunity to become more involved in the Society and the industry. If you (or a BTS member you know) would like to actively assist in the growth of BTS and serve our members, please submit a nomination. We encourage our young members and those working in new media technologies to volunteer and become more involved in the Society. Our members are engaged in research, standards, technologies and companies that touch and impact the daily lives of virtually everyone on earth.

To submit a nomination for yourself or on behalf of someone else, please use the form in the link. The nominations will be open from March 16, 2022 through May 9, 2022.

Should you have any questions please send an email to Jennifer Barbato, Society Staff, [j.barbato@ieee.org](mailto:j.barbato@ieee.org).

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**Cover: “Cell” sites for wireless broadband communications have been part of the global landscape for decades; now these services are being augmented with “fifth generation or “5G” technology. In this issue of Broadcast Technology, several experts in this field share their thoughts on how this “newcomer” may impact conventional terrestrial broadcasting.**

**Cover photo courtesy of Paul Shulins, Shulins' Solutions**

# From The Editor

## More on NextGen TV's Arrival, 100 Years of Broadcasting, and Some 'Thank You's'

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



In the last issue of **Broadcast Technology**, I reported on the “coming of age” of ATSC 3.0 television broadcasting in the Washington, D.C. market which serves your editor’s home. Yes, we have a host station—WHUT at Howard University—which is carrying NextGen TV signals originated by the major network affiliates in Washington.

As a result of 3.0 service now being available, I began searching for the best fit for a new television receiver to replace the 55-inch Sony model I purchased more than a decade ago (it was a very large-screen model back then!). Now that there are four TV manufacturers offering sets in North America that decode ATSC 3.0, there’s a lot more to evaluate and choose from than even a year ago, so I’ve been making the rounds of the “big box” store retailers for the “perfect” replacement for the aging Sony LCD model that has provided rock-steady performance for the ATSC 1.0 signals delivered over-the-air by area broadcasters. (There also the “SPF” or spousal approval factor to consider in making the selection, with a balance that has to be achieved between the bigger screen size that I’d like and “something that doesn’t completely dominate the room.”)

As the selection process for a new TV continues, I would like to report on some heartening news, and also comment on something that needs improvement.

First, as I mentioned in my last editorial, the groups behind the ATSC 3.0 U.S. rollout have been running TV announcements about the availability of NextGen TV and some of its attributes. While the messages were apparently discontinued after the 2021 holiday period, they must have worked. As reputed recently by **Broadcasting And Cable** writer Jon Lafayette, American consumers are becoming more aware of NextGen TV, with some 40 percent of the U.S. population now aware of ATSC 3.0, which is up from 25 percent this time a year ago. He also reported that the study, which was conducted by the Magid research organization, in conjunction with Pearl Tv and Dolby Laboratories, revealed that 74 percent of those who viewed the NextGen TV promotional ads said they were likely to purchase a receiver for the new DTV standard.

It’s also encouraging that most of those I’ve spoken with in the TV and appliance stores are aware of NextGen TV

and are able to answer at least some of my questions (even though this might necessitate a little Internet research on their part before they could provide an answer).

That’s the good side.

On the negative, the salespeople I spoke with agreed that while some progress is being made in making the general public aware of ATSC 3.0 and what it can offer them, they also agree that while virtually everyone coming into their stores has at least heard about 5G, the number of those who’ve heard of NextGen TV or ATSC 3.0 pales in comparison. (Message to Pearl TV and Dolby: start running those ads again, and while you’re at it, buy some space on the pages of consumer magazines and newspapers, and also make it a point to invite some newspaper “entertainment section” editors to lunch and fill them in on NextGen TV’s attributes over a meal. Maybe even offer to let them try out an ATSC 3.0 set in their home for a while.)

Another item that needs improvement in the area of NextGen TV awareness and education is to get the “NextGen TV” logo out in front of consumers as soon as they enter a big box or other retailer’s store. I couldn’t help but notice that the NextGen TV logo is stamped very prominently on receiver boxes from Sony, but this seems to be absent on those of the other three manufacturers who offer 3.0 sets for the U.S. market (at least on the new set boxes that I inspected). I really don’t know why this little bit of consumer awareness generation, is being ignored, as these manufacturers—along with Sony—very prominently proclaim the “4K UHD, HDR, Roku, AirPlay, Google Assistant, Alexa, and similar attributes of their TV product boxes.

Actually, this sort of subtle marketing (including feature sets on shipping containers) is nothing new. I recall that back in the early 60s when color TV was a “hard sell” to many due to its price and scarcity of programs in color, that set manufacturers tried to stimulate things a bit by printing a color TV screen image—color bars or other artwork—on the cardboard shipping boxes. This drove home that a family had purchased something rather special and unique then. I recall too seeing these boxes being prominently placed at the end of driveways—long in advance of the scheduled rubbish collection day—so that others in the neighborhood would take note that one of their neighbors had taken the color plunge. This amounted to a bit of low-key and very ephemeral advertising (as well as display of a status symbol of sorts), but it did encourage conversation between neighbors, as well as hints about an invitation to watch the next “big game” being televised in color.