

IEEE

# Broadcast Technology

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



*Looking Back At 20 Years  
Of Satellite-Delivered Radio – p. 5*

# President's Message

## Ralph Hogan, BTS President



Summer is in full force where I live in Phoenix, Arizona, USA. We have been having 117 degree F (47 C) days for the past couple of weeks, and have set several new record highs. It's a good time to stay inside and get out of the heat. Business travel and face-to-face meetings are slowly beginning again with some cautions. Many of these are being planned as hybrid

meetings with both virtual and face-to-face components. The NAB Show has been moved from April to October this year, and the IBC event moved from September to December. This has forced a number of other meetings and conferences to be clustered in the fourth-quarter of the year. At

this time, it appears that most everyone is looking forward to some relief as we move into a post-pandemic world. The pandemic is still turning out variants of the virus, but the vaccines seem to be doing a good job of protecting those who chose to be vaccinated.

The Society has gone through an IEEE TAB Periodicals Review and Advisory Committee (PRAC) review of the Transactions on Broadcasting, and is in the process of going through an IEEE TAB Society and Council Review Committee (SCRC) review in 2021. Both of these reviews are conducted every five years for each Society or Council.

The objectives of the PRAC review process are to:

- examine timeliness and quality of publications
- assure that periodicals comply with IEEE policies and procedures
- assist the Society/Council in enhancing self-awareness of its periodicals
- determine the financial health of the publications
- provide suggestions for improvements and share best practices from other Society/Councils.

The SCRC has three main purposes:

- provide feedback and recommendations to the Society to ensure they remain the top organizational unit in their field of interest,
- help the Societies and Councils in any area they may need help and
- share best practices among Societies and Councils

One of the outcomes of the SCRC review is that BTS can demonstrate our accomplishments during the past five years, and there have been many. We have also expanded our international reach into other IEEE regions and developed additional industry participation by joining several European industry organizations. We have also produced best practices guidelines for our conferences and started a new virtual conference "Pulse," along with numerous other webinars for members and Young Professionals.

Our 2020 and 2021 budget years have been hard hit by the pandemic and loss of IBC revenue, but due largely to BTS staff and volunteer support, we have managed to start several new revenue streams. There's not a lot of income yet, but

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**OUR COVER:** The New York SiriusXM satellite control room in as it appeared in the early 2000s.

(Photo courtesy of SiriusXM)

# From The Editor

## Business 'As Usual,' Hopefully!

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



While it hardly seems possible—time goes way too fast these days—it's been more than a year since we've been living in “unusual times” due to the outbreak of the Coronavirus pandemic. I remarked early on in this column that with the abrupt cessation of “normal” activities and the “lockdowns” that had occurred in many localities to try and halt the spread

of the disease, I was reminded of a WWII-era song, “When The Lights Go On Again All Over The World.” The intent of the song was to try and spread optimism about the ending of the war and the world getting back to normal.

Unfortunately, even after some initial hope as we (in the Northern hemisphere) were going into the summer season that with declining infection and death rates being reported, it seemed that we may be getting close to the point where indeed, lights were beginning to come on again. Bans on group activities and other restrictions were lifted in many places and more and more of the population was getting vaccinated; however, with the emergence of the “delta” mutation or variation of the virus, the number of new infections (and unfortunately, deaths) have again begun to climb, and some of the previously ended restrictions are again being put back in place. However, there is still hope that the “light will be coming on again” sooner rather than later, as here in the United States, more and more of those who were skeptical of the mass vaccination programs that were conducted earlier this year are now seeking out the vaccines. Great Britain announced just a few days ago that entry restrictions were being eased on fully vaccinated travelers from the United States and E.U. nations, so maybe before too much longer business can resume “as usual.”

In the meantime, plans are fully underway to resume the NAB Show, which was cancelled last year (the second time ever for the nearly one hundred-year-old event). It's been pushed back from April to October this time, though. The IBC Show is also scheduled to return, but will be held a few months later than its usual September time frame.

And while I have come to enjoy being able to attend technical conferences held all over the United States and the world without having to travel any further than the chair in front of my computer, I still miss visiting with friends and colleagues at “bricks and mortar” real-world events.

### End Of An Era

The United States has reached another milestone this summer—not in connection with the pandemic, but rather in broadcasting. This was the sunsetting of analog television transmissions. Some 12 years ago (June 2009), our communications regulatory body, the FCC, mandated the end of all analog broadcasting by full-power TV stations, but cut another class of television station operator—the “low-power” broadcaster—some slack, as no federal funding for equipment necessary to convert to digital had been made available for these smaller, typically community-oriented, stations. (As part of an on-going spectrum reallocation, the full-power broadcasters did receive government monies for transitioning to both new spectrum and digital transmission.)

The low-power TV stations (LPTVs) were initially given until 2015 to sort things out and come up with a way for funding the necessary equipment for ATSC 1.0 transmissions. However, before that “line in the sand” arrived, another spectrum repack was starting to happen, and the FCC stretched the LPTV conversion deadline to the middle of this year. (By the way, the “100 percent” digital TV mandate affected another class of transmitting facilities also, the low-power “translators” that receive over-the-air signals from a station's main transmitting facility and retransmit them on a different frequency to provide service in areas where terrain or other issues make reception of the main signal problematic. (In the state of Utah alone, there are some 400 translators in operation.)

At any rate, with the arrival of July 13, the curtain came down for good on U.S. analog television broadcasting. It's hoped that by now (12+ years since the full-power analog shutoff) that the percentage of households receiving television over-the-air has had sufficient time to make the switch. (How long has it been since anyone has seen a CRT TV receiver with a “set-top” digital-to-analog converter in operation?) I imagine that the only such recipients of analog OTA broadcasts here in 2021 are the handful of cable TV operators who haven't invested in digital demodulators for the LPTVs they've been carrying.

While U.S. low-power TV broadcasting only seems to have come into its own a few decades ago, the concept is far from new. When the post-World War II TV broadcast boom began, the FCC had planned for such community operations with the allocation of a common spectrum space for this purpose, similar to the setting aside of a half-dozen or so “local” frequencies for AM radio broadcasting in the medium wave spectrum. Stations opting for such positions on the dial were initially limited to 250 Watts and could broadcast day and night non-directionally. (The power cap was increased to 1,000 Watts in the 1960s as a possible answer to the increasing amount of MW manmade noise and spectrum congestion.)