



IEEE Broadcast Technology

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Latest
ATSC 3.0 News

ATSC 3.0 Gets High Marks
in Shanghai Testing

President's Message

Bill Hayes, BTS President



Greetings BTS Members!

Writing the President's update for this edition of Broadcast Technology has been a real challenge for me. I have quite literally been all over the world in 2015, meeting BTS members and promoting the society in some very different places.

In previous columns I have covered our participation at the Consumer Electronics Show in Las Vegas and the IBC Content Everywhere event in Dubai—both in January. In April we were back in Las Vegas with a tutorial for the National Association of Broadcasters Show and the inaugural presentation of our Video-Over-IP course taught in conjunction with the pre-NAB Technical Conference put on by the Public Broadcast Service. In May,

I was at the ATSC annual meeting, with the program there including a plethora of BTS members who are working on the ATSC 3.0 standard. The last event I attended was our own very successful Broadband Multimedia Systems and Broadcasting symposium last June in Ghent, Belgium.

In July, BTS had a stand in Sydney, Australia at the Society of Motion Picture and Television Engineers' Biennial Conference and Exhibition put on by the Australia Section. The program featured a presentation on layered division multiplexing by BTS Distinguished Lecturer Pablo Angueira from the University of the Basque Country in Spain. In addition, I had an opportunity to meet with a number of BTS members and offer some guidance and encouragement in the formation of a Joint Society Chapter made up of BTS members, as well as members from the Consumer Electronics Society and the Product Safety Engineering Society. At the end of November I had the honor of approving the formation of this joint chapter.

In September, BTS was well represented at the International Broadcasting Convention in Amsterdam with a number of presentations by our members, including a tutorial on ATSC 3.0 that was offered to all IBC attendees at no charge. BTS also participated in supporting two students from the St. Petersburg State University of Film and Television. These students were awarded grants to attend IBC after participating in a rigorous competition. I had the opportunity to meet both students and found them not only to be very intelligent and deserving of the award, but also very interested in pursuing careers in media.

October was a very busy month with our own Annual Broadcast Symposium. The event was held in Orlando, Fla. This year and featured an exceptional program, including a tutorial on immersive sound for future broadcasting. This session will be updated and presented at the 2016 NAB Show in Las Vegas. Many of the other presentation on the program were highly relevant or "hot topics," including sections on spectrum issues and the just completed World Radio Conference. Overall, I would have to say that this year's Symposium was one of our most compelling and timely in a long time. In October, I saw the BTS also represented at the annual SMPTE Technical Conference in Hollywood, Calif.

As the President of the BTS, I have had the opportunity to reach out to members and potential members all over the world this year. Everywhere that I travel, I try and spend time talking with members and non-members to find out what kinds of services and support they're looking for as they navigate through the dynamic and changing media industries. It's interesting that a common theme has emerged. This is making "practical education" a top priority for people working in the industry (those I would term practicing engineers). At the beginning of this century, the BTS leadership started receiving requests for such a program from

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COVER: ATSC 3.0 compatibility testing being performed in Shanghai. See story on p. 17. (Photo courtesy of NERC-DTV.)

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From the Editor

Some Congratulations, a Farewell and 'The Shape of TV To Come' (Maybe)

James E. O'Neal, BTS Newsletter Editor



Before I get too far into my ruminations and rants, I'd like to offer congratulations in several different directions. The first of these is to Roz Clark, Jim Stenberg and Guy Bouchard, and everyone else involved in putting together the 2015 Broadcast Symposium. The program was excellent, the venue was first class, and the support by Society members and event sponsors couldn't have been better. Attendance was up from last year's event and I seemed to notice some new faces in the crowd too. The Tuesday trip to Cape Canaveral and the Kennedy Space Center will also be long remembered by those who were lucky enough to be accommodated (there were only 25 slots available). Hats off to Paul Shulins, Jim Moody and John Cowart for making this a very special occasion.

Part two of my congratulations go to the Advanced Television Systems Committee in connection with the elevation of the physical layer of the ATSC 3.0 standard to "candidate status" (see my article about this elsewhere in this issue of Broadcast Technology for more information). This is a very important step forward in moving the standards work ahead, as it means that equipment manufacturers and others are now able to build prototype gear. And build they did! Compatibility testing of prototype ATSC 3.0 DTV modulators and demodulators was the focus of the Oct. 19-23 Shanghai, China "Plug Fest" event. I'm pleased to report that the various systems "talked" with each other and all of the planned objectives of the testing were achieved. The physical layer's move to "candidate status" was really a significant event in broadcast television, but rather curiously, there was zero reporting about it in the popular press. Harry Jessell, editor of **TVNewsCheck**, drove this home in his story "3.0: The Big Story Americans Haven't Heard" (<http://www.tvnewscheck.com/article/88912/30-the-big-story-americans-havent-heard>). If you didn't see it when it first appeared on Oct. 2, you'll certainly want to give it a read. (One day earlier, Jessell's publication also ran a question and answer session with Wayne Luplow and Jong Kim in connection with the physical layer's readiness.) The ATSC 3.0 reporting is very positive, but Jessell notes that the popular press seems to have "written off broadcasting as an archaic medium on its way to oblivion" and says that FCC Chair Wheeler "sees it mostly as a place to raid for spectrum for wireless carriers." Despite the lack of mainstream publicity about ATSC 3.0, Jessell comes across as very positive about ATSC 3.0, and I hope that the efforts of the ATSC and the men and women who have contributed

to making the standard a reality will be getting their much deserved praise in the popular press before long. Hopefully, there will be some "buzz" regarding ATSC 3.0 at the January CES event which is quite widely covered by all media. (We have to remember too that when Bell Labs announced development of the transistor, the **New York Times** only gave it a few lines of play and these were buried some 40 pages into the paper at the bottom of a radio column.)

My third set of congratulations, along with a very big "thank you," go to the fine folks at China's NERC-DTV research group who hosted the "Plug Fest 2015" ATSC 3.0 compatibility testing event and were instrumental in making it the success that it was. An especial "pat on the back" goes to that organization's vice president, Yao Wang. Yao and his staff took great care to personally ensure that event participants were made to feel more like family instead of a group of strangers wearing name badges. The hospitality afforded us went way over the mark. Thanks to Yao and his group, my trip to China will go down as one of the best bits of foreign travel that I've been privileged to make.

Speaking of the Shanghai event, in looking back over the past six or seven weeks, it seems that lately I've spent more time with BTS members than with my own family. First it was the AdCom meeting held concurrently with the September IBC Show in Amsterdam and then time together at the BTS October Symposium in Orlando. A few days later some of us were heading for Shanghai, China for the "Plug Fest 2015" event. After returning from there and a quick turnaround, it was off to Hollywood for the SMPTE Conference. (I wasn't able to attend the Audio Engineering Society Conference in New York or the AFCCE fall event in Virginia this year, but I'm sure that the BTS was well represented at both.) The Government Video Expo in Washington, D.C. capped off this much-traveled year!

In addition to these congratulations, I also like to extend a heartfelt 'thank you' to Amy Reeder for her support on behalf of our Society during the past several years. As many of you know Amy has taken a new position within another IEEE division. We wish her all the best in this new endeavor.

Content for Broadcast Technology

As you may have noticed the size of this BTS publication is on the rise. This is what we're striving for—more content of interest to our readers. However, I can't do this alone. I need your original articles, along with BTS chapter reports and other Society new reports. Please keep them coming. And thanks to all of you who have contributed to this issue.

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