



The Society of Broadcast Engineers

**Fox Valley Wisconsin SBE Chapter 80 PO Box 1519
Appleton, WI 54912-1519**

February 2017

Like us on FaceBook -[facebook.com/sbe80](https://www.facebook.com/sbe80)
Our website sbe80.org
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Our next SBE Chapter 80 meeting will be at the Out O Town Club at noon February 21th.

Fellow Chapter 80 members,

Last month we were pleased to have Jeff Clarine , Regional Sales Manager and Ben Crease, Asia Pacific Regional Sales Manager from Jampro Antennas who presented on some of Jampro's broadband antenna technologies and examples of installations from the Asia Pacific countries. Areas of high population densities in that part of the world are served by networks of lower power TV transmitters synced together. In spite of overnight freezing rain and snow conditions, 11 members and guests were able to attend a rare chapter presentation from someone who works on the opposite side of the world. A program for our February meeting is still in the works – plan to attend our next meeting on the 21st at the Out o' Town Club in Kaukauna to find out and enjoy the fellowship with our chapter members and friends.



The SBE “RF 101: Broadcast Terrestrial Transmission Systems Course” webinar started last month with Module 1 “Introduction to Radio Frequency”. It continues with Module 2, “Transmission Lines”, on March 2. You may still register at the SBE Website. The first module is now available as an on demand webinar.

SBE annual membership renewal letters were sent at the end of January. Please take time to renew your membership as soon as possible.

A SBE certification exam session is planned at the NAB Show on Tuesday, April 25; register through the SBE office by March 17 if you plan to be at NAB and would like to take an exam.

Again, please plan to attend our next meeting on the 21st!

Best Regards,

Mark Hoenecke

CHAPTER 80 ELECTED AND APPOINTED OFFICERS

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The SBE is sharing the following message with our members at the request of the FCC.

The Federal Communications Commission is requesting your assistance in disseminating the information below to your organization's members.

It has come to our attention that unauthorized persons recently may have illegally gained access to certain audio streaming devices used by broadcasters, and may have transmitted potentially offensive or indecent material to the public. We believe that the reported cases involved unauthorized access to equipment manufactured by Barix, which some licensed broadcasters use for studio-to transmitter (STL), remote broadcast (remote) and similar audio connections. We understand that the unauthorized access to the devices may be due, in part, to instances where the licensee fails to set a password for devices with no default password, or to re-set default passwords on the Barix device.

We urge licensees to take all available precautions to prevent future unauthorized transmissions. In many cases, there may be simple, practical solutions to prevent such situations from occurring. For example, we strongly encourage licensees that use Barix devices, as well as other transmitting equipment, to check and, if necessary, add a password, or reset existing passwords with new, robust passwords. Similarly, if a broadcast station experiences turnover in staff who had access to passwords, we encourage licensees to reset the password to ensure future security. We also recommend that broadcasters investigate whether additional data security measures, such as firewalls or VPNs configured to prevent remote management access from other than authorized devices, in some cases, could be implemented to preserve this potentially critical part of the broadcast transmission chain. If you suspect that broadcast equipment has been subject to attempts at unauthorized access, we also recommend that you contact the equipment manufacturer and/or a data security firm. We also suggest that you notify the FCC Operations Center at 202-418-1122 or FCCOPCenter@fcc.gov of suspected unlawful access.

If you have any questions, please contact Lark Hadley, the regional director for the Enforcement Bureau's Region Three via WR-Response@fcc.gov.
Thank you.

Charles Cooper
FCC/Enforcement Bureau/Office of the Field Director/Field Director

Look ahead at upcoming opportunities to take a [certification exam](#) in your area with the local chapter.

If you would like to take an exam but are not able to make it during these sessions, please contact Megan Clappe to ask about special proctoring.

Below is the upcoming certification exam schedule

Exam Dates Location Application Deadline

February 3-13, 2017	Local Chapters	December 31, 2016
April 25, 2017	NAB Show Las Vegas	March 17, 2017
June 2-12, 2017	Local Chapters	April 21, 2017
August 4-14, 2017	Local Chapters	June 5, 2017
November 3-13, 2017	Local Chapters	September 25, 2017

If you have any questions regarding SBE certifications, please contact the Certification Director, [Megan Clappe](#).

Module 2 of RF101 Will Cover Transmission Lines

The SBE RF101: Broadcast Terrestrial Transmission Systems webinar series is an introductory survey of the RF fundamentals needed to successfully monitor a broadcast facility. [The first module](#) of the eight-part series was held on Jan. 26. The archive recording of that webinar will be available by mid-February.

[Module 2, Transmission Lines](#), will be held on Thursday, March 2 at 2:00 pm ET. This live webinar will discuss the following topics: definition and types of transmission lines, impedance and its importance to applications, losses associated with coax, wavelength considerations which impact the broadcast facility, return losses (including VSWR and standing waves), and power considerations of both coax and connectors. Upon completion of this webinar, participants will be able to describe different types of transmission lines, antennas, and their characteristics.

Instructing the SBE RF101: Module 2 - Transmission Lines webinar is Dennis Baldrige, CPBE, 8-VSB, AMD, DRB, CBNT, a veteran of the broadcast engineering field for more than 30 years. Baldrige is a Senior member of the SBE, holds an FCC Lifetime General License (formerly a First Class FCC License) and Amateur Radio Extra Class License (K0DB). He also holds a M.A.E. and teaches science courses for Upper Iowa University. As owner of Baldrige Communications, LLC, he works as a contract engineer and has authored articles for *Radio Guide* magazine. Baldrige serves as an inspector for the FCC Alternate Inspection Program of the Wisconsin Broadcasters Association.



The RF101: Broadcast Terrestrial Transmission Systems webinar series is an introductory survey of the RF fundamentals needed to successfully monitor a broadcast facility. The webinars are targeted to those with minimal or no background in RF and/or are relatively new to the field. They also serve as a refresher for more seasoned engineers. Many come to the field of Broadcasting from varied backgrounds such as IT, electronic technicians or military vets, and find themselves immersed in the complexity of a broadcast facility needing to understand and work with the RF end of the system. This multi-module course will present an overview of RF needed to understand the basics and make informed

decisions. RF101 modules will be presented in eight 1-1.5 hour live webinars.

[Register for Module 2 - Transmission Lines](#) at the SBE website. The cost is \$57 for members of SBE and \$87 for non-members.

SBE RF101 Webinar Series Course Modules

1. Introduction to Radio Frequency (RF) - On-demand archive available by mid-February
- 2. Transmission Lines - March 2, 2017 2:00 p.m.**
3. Towers, Antennas, and Transmission Systems
4. Antenna Gain - Feed-line Loss
5. Modulation Fundamentals
6. AM, FM, TV RF Propagation
7. RF Transmitter Measurements
8. FCC Regulations

[More >](#)

FCC ELIMINATES TWO PUBLIC INSPECTION FILE REQUIREMENTS The Federal Communications Commission eliminated two public inspection file rules. These rules currently require: commercial television and radio broadcast stations to retain, and make available to the public, copies of correspondence from viewers and listeners; and cable operators to maintain and allow public inspection of the location of a cable system's principal headend.

The Commission modernized public file rules for broadcast television licensees in 2012, moving television public files that previously were retained at stations' local main studios to an online, Commission-hosted database. TV broadcasters completed their transition to the online file in July 2014. Moving to an online filing process made it easier for consumers to access information about their broadcast services without having to travel to the station's main studio and reduced the cost of broadcaster compliance. In January 2016, the Commission expanded the move to online filing to cable, radio, and satellite operators.

The elimination of these rules will reduce regulatory burdens on commercial broadcasters and cable operators without adversely affecting the general public. Removing these requirements also will enable broadcasters and cable operators to make their entire public inspection file available online and permit them to cease maintaining local public files. (fcc.gov)

Online Frequency Coordination Form Discontinued

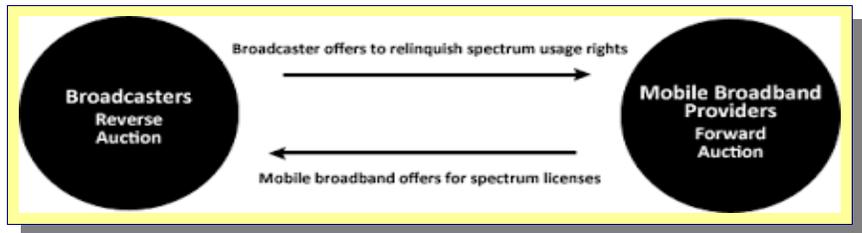
The online SBE frequency coordination form will be discontinued as of February 6, due to a dwindling number of users. The form was originally created to help those coordinate frequencies for an event but didn't know who to send the request. The online system sent the request to the appropriate coordinator. Today, most people who request coordination make contact directly with the SBE frequency coordinator in the area in which they will operate. [The list of SBE and affiliated frequency coordinators](#), arranged alphabetically by state, is located on the SBE website.

The SBE thanks Dan Ryson, who created the online form for the SBE and Cavell-Mertz for hosting the form.

[More >](#)

Incentive Auction Nearing End On December 5, stage 3 of the Incentive Auction ended after one round of the “forward auction” part of the auction.

The wireless providers bids did not meet the amount that the FCC needed to cover the amount that the FCC proposed to buyout broadcasters in the reverse auction which was \$40,313,164,425 or the \$1.25 per pop per megahertz minimum in large markets. The wireless providers offered \$19,676,240,520 which was half of what was offered to broadcasters. The FCC then started the fourth stage of the incentive auction. The FCC is seeking 84 megahertz of spectrum from the broadcasters with the wireless industry getting access to 70 megahertz after guard bands were subtracted. The 70 Megahertz is to be divided into seven 10 megahertz blocks with two 5 megahertz channels, with one for uplink and one for downlink. The new 84 megahertz wireless band will start at TV channel 38 using reserved TV channel 37 as the dividing line between TV and wireless services. The remaining TV band would end at channel 36 giving 35 channels for TV use.



With the limited use of channel 6 in order to protect the FM band from interference and the limited use of channel 14 in order to protect the 450 to 470 megahertz land mobile band from interference, there are really only 33 channels available. The reverse auction part of the fourth stage of the incentive auction started on December 13 and ended on January 13 with a break for the holidays. The FCC’s final offer to the broadcasters was \$10,054,676,822 which is \$78 billion less than what broadcasters were offered in the first stage of the auction.

On January 18, the forward auction begun with the bidding opening at \$17.7 billion. On the second round, the bidding meet the FCC criteria for minimum bids for the large markets, which meant that stage four would be the final stage of the auction. The forward auction continues until there are no more bids for spectrum in any market. As of the end of the day on February 3, the total amount bid after round 31 was \$19,227,253,461. After the forward auction ends, there will be another auction in which the winners will make bids for specific pairs of channels from the winning spectrum. After that auction ends, the FCC will release the final TV channel allotment table and the repacking process will begin. On January 27, the FCC released two notices outlining the repacking process.

One of the notices covers the procedures or steps of the repacking process and the second notice covers the timetable for the repacking process. The procedures notice (http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0127/DA-17-106A1.pdf) covers such things as: filing for the construction permit; modifications to the construction permit, payments to stations that participated in the auction and the steps to be taken for shutting down or for sharing a channel, and reimbursement to stations making channel changes.

The second notice (http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0127/DA-17-107A1.pdf) covers the creation of the timeline for the repacking and possible use of temporary use of another channel, sharing channels, interim facilities, prohibited communications, reimbursement issues and LPTV issues. With the Incentive Auction near the end, the repacking process will start with a fast and furious timeline, with so many unknowns, it will be a very stressful and confusing time for the remaining TV broadcasting stations. (Tom Smith SBE24)

FCC releases NRPM for ATSC 3.0 and AM improvement

ATSC 3.0: In this Notice of Proposed Rulemaking (NPRM), we propose to authorize television broadcasters to use the “Next Generation” broadcast television (Next Gen TV) transmission standard associated with recent work of the Advanced Television Systems Committee (“ATSC 3.0”) on a voluntary, market-driven basis, while they continue to deliver current-generation digital television (DTV) broadcast service, using the “ATSC 1.0 standard,” to their viewers.1 ATSC 3.0 is being developed by broadcasters with the intent of merging the capabilities of over-the-air (OTA) broadcasting with the broadband viewing and information delivery methods of the Internet, using

the same 6 MHz channels presently allocated for DTV. According to a coalition of broadcast and consumer electronics industry representatives that has petitioned the Commission to authorize the use of ATSC 3.0,² this new standard has the potential to greatly improve broadcast signal reception, particularly on mobile devices and television receivers without outdoor antennas, and it will enable broadcasters to offer enhanced and innovative new features to consumers, including Ultra High Definition (UHD) picture and immersive audio, more localized programming content, an advanced emergency alert system (EAS) capable of waking up sleeping devices to warn consumers of imminent emergencies, better accessibility options, and interactive services. With today's action, we aim to facilitate private sector innovation and promote American leadership in the global broadcast industry.

http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0202/DOC-343305A1.pdf

AM Improvement In the Further Notice of Proposed Rule Making in this proceeding,¹ the Commission proposed to relax the current rule setting forth where an FM fill-in translator rebroadcasting an AM broadcast station may be sited.² Having now opened and closed two filing windows in which over 1,000 applications were granted to acquire and relocate FM translators to rebroadcast AM stations,³ we believe it is desirable to act on the translator siting proposal expeditiously, so as to provide these window applicants maximum flexibility in providing service to their communities and nearby areas.⁴ We will act on the other proposals set forth in the AMR FNPRM in a later Report and Order.

(fcc.gov)

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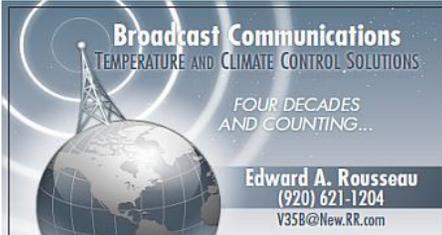




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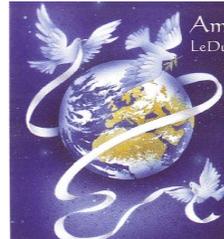
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