

June 2014

# Society of Broadcast Engineers Chapter 24 Newsletter Madison, Wisconsin



# Next Meeting

## Thursday, June 12 ANNUAL CHAPTER 24 PICNIC & "STACKS OF WAX"

The Chapter will supply burgers and brats, condiments, buns, plates,



cups and utensils.
The grill will be
started at 5:00
PM. Bring a dish to
pass, an alternate
entrée if desired
and your preferred

beverage (we have an alcohol permit).

Please sign-up on the chapter web site (<a href="http://www.sbe24.org">http://www.sbe24.org</a>)

There is a playground for the kids and we have an amplified music permit for the evening's music provided by Kevin Ruppert of Trailing Edge Entertainment.

This year's theme is "Stacks of Wax", so bring your favorite vinyl. Dig out those old air checks and transcriptions! Come for the food and company; stay for the relaxing atmosphere!

5:00 PM - 9:00 PM
Badger Prairie Park, Shelter #1
Verona, Wisconsin
No Park Admission is required.
There will be a brief business
meeting about 7:00 PM to introduce
our newly- elected officers.

Visitors & guests are welcome at all Chapter 24 events!

# **Incentive Auction Action Taken**

>>> by Tom Smith

On May 14th, the Commission took the first step in moving towards the Incentive Auction of the 600 MHz TV band. By a three to two vote the Commission adopted a Report and Order (http://transition.fcc. gov/Daily Releases/Daily Business/2014/ db0515/DOC-327100A1.pdf) adopting the first rules on the conduct of the incentive auction and the repacking of the TV broadcasters in the remaining spectrum to be used for TV transmission. Those voting for the new rules were the Chairman Tom Wheeler and Democrats Mingon Clyburn and Jessica Rosenworcel. Voting against the action were the two Republican Commissioners Ajit Pai and Michael O'Rielly. O'Rielly's dissent was on how the auction was to be conducted and Pai's dissent covered a number of issues including how the auction would be conducted, the method for determining the value of a TV license that participates in the auction, cost of the repacking of the remaining stations, the effect on rural areas with the possible loss of translators and low-power stations, and the methods for computing coverage and interference in determining how stations are repacked. He also disagreed on how the guard bands for the new wireless bands would be allotted and how much bandwidth that each wireless provider would be allowed to bid on. Even though Commissioner Clyburn voted for the Report and Order, she expressed concern about the possible loss of low-power stations and the effect that would have on minorities as many of them operate as ethnic and community stations.

As of this writing, the full Report an Order has not been released. From the summary, (http://transition.fcc.gov/Daily\_Releases/Daily\_Business/2014/db0515/

DOC-327099A1.pdf) the following actions were described. The Commission adopted rules on how the auction will be conducted. The auction will start with the reverse auction in which full-power and class A LPTV stations that wish to participate would have three options: give up their license, share a channel or move from UHF to VHF. UHF stations can pick if they wish to move to a high band or low band VHF channel. High band VHF stations can also ask to move to a low band channel as an option in the auction. In the reverse action the FCC will set a starting price and then each station in the auction will indicate if they would accept the amount set in each round as acceptable for them to use their option. If there are 5 stations participating and the FCC is looking for spectrum from three stations, the auction will continue until two stations no longer accept the FCC's offer. The three stations that take the lowest offer will then either move to a new VHF channel, share a channel or go off the air. After the reverse auction concludes, then the wireless carriers will bid in a traditional forward auction with the winner being the highest bidder.

#### **AUCTION**

>>> continued on page 6



## **Coming Up**

Tues., July 15 Storage Technology Wed., Aug. 13 AJA Presentation Thur., Sept. 18 Troubleshooting Ancillary Data & Broadcast Clinic Preparation



## In this Issue

Meeting Minutes	2
SBE Celebrates 50th	
SBE On-line Course	3
Amateur Radio News	4



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# **Meeting Minutes**

from the May 2014 Business Meeting

The May meeting of Chapter 24 of the Society of Broadcast Engineers was held Wednesday May 14th at 7pm at WMTV Television Madison, WI. Of 16 attendees, all were members and 11 were certified.

Chair Kevin Trueblood called the meeting to order at 7:06pm and the April minutes were approved as published.

The results of the elections were announced as Chairman: Kevin Trueblood, Vice Chair: Kevin Ruppert, Secretary: Marshall Deets, Treasurer: Leonard Charles.

Outgoing treasurer Matt Glissendorf reported a positive balance and was thanked for his service to the chapter.

Paul Stoffel reported the deadline for newsletter articles is June 3.

Fred Sperry reported there were no Sustaining Membership renewals which put us at 19 Sustaining Members.

Steve Paugh reported our next meeting will be the picnic June 12th. The following meeting will be July 15th.

Jim Hermanson reported the local certification exams will be August 8-18 with the application deadline of June 6th.

Tom Smith offered that there was nothing notable to report for frequency coordination.

Leonard Charles reported the deadline for nominations and submissions for National Awards is June 13th. The annual SBE Membership Drive ends May 31st. June 24th there will be an RF Safety Course webinar presented by Richard Strickland of RF Safety Solutions; SBE Members \$95 / Non-Members \$150. The SBE Leadership Development course will be presented Aug 12-14 in Atlanta, GA. The instructor will be Rodney Vandeveer, Professor at Purdue University and Leadership Consultant. More details are available on the SBE website.

Under old business Fred Sperry noted details needing updates on the Chapter website.

Under general announcements Tom Smith noted there will be information coming soon on FCC Rulemakings concerning multi-language EAS, the 5.8 GHz band and the spectrum auction.

There were no professional announcements made.

The meeting was adjourned at 7:21pm and the NAB roundup was presented by various members.

ML Deets, Sec'y.



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#### PROPOSED RULEMAKINGS

#### GN Docket No. 12-354

Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band

The FCC has proposed the setting aside 150 MHz on the frequency range of 3650-3700 MHz as a Citizens Broadband Radio Service (http://apps.fcc.gov/ecfs/document/ view?id=7521099242). This will share the spectrum with some Federal users, mainly relocation services (radar) operating on the ocean coasts and fixed satellite downlinks which they will be required to protect. This service will operate in a matter similar to TV White spaces. The transmitters would have to check with a database when they are turned ON to determine channel openings. The stations would operate with a 10 MHz channel and will be limited in the power they can operate at.

The new licenses in the band would be allotted in two ways. There will be priority licenses which would be licensed in a traditional way and would be subject to auction and General Access licenses which would be licensed by rule, like CB radios and Family service radios. Fifty percent of the band not used by the Federal users and the satellite downlinks would be allocated to the general users.

The FCC plans on the band being used in mainly small cells to offload traffic in times of high demand. General Access users would have use of spectrum when priority licenses are not in operation. Both priority and general users would not have fixed assignments and would have to be able to change channel operation as the database

dictates. License terms for priority users would be one year, with the licensee having to reapply for a new license yearly and would be limited to holding a license in one location for a total of 5 years.

For broadcasters, this proposed rulemaking could cause some issues as it is located adjacent to the lower end of the C band satellite downlink spectrum.

The Commission adopted and released this action on April 23rd.

#### **EB Docket No. 04-296**

Comment Requested to Refresh the Record in EB Docket NO. 04-296, on Petition Filed by the Minority Media and Telecommunications Council Proposing Changes to Emergency Alert System (EAS) Rules to Support Multilingual EAS and Emergency Information

On March 11th, the FCC reopened an existing rulemaking (http://transition.fcc.gov/Daily\_Releases/Daily\_Business/2014/db0311/DA-14-336A1.pdf) for further comment on EAS warnings in Spanish and other languages.

The rulemaking proposed that all Presidential messages relayed by Primary Entry Point stations are to be broadcast in both English and Spanish. Also proposed is that one station in each market that has an LP-1 EAS station have a LP-S station to air EAS messages in Spanish.

In areas where another language has a large population speaking a language besides English and Spanish, a station should be designated a LP-M for Multilingual. One other station should monitor and rebroadcast information from the LP-S or LP-M station and in the event that a LP-S or LP-M station is unable to broadcast the messages, another station in the market would be required to broadcast the messages.

#### Rulemakings

>>> continued on page 5



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compiled by Tom Weeden, WJ9H

#### ARRL Celebrates its Centennial at Dayton Hamvention® 2014

Dayton Hamvention 2014 already was a Regional ARRL Centennial Event, but May 18 — Hamvention's last day — was the 100th anniversary of the American Radio Relay League's founding. A birthday party and free cake helped to draw a room-filling crowd of 200 or more for the Sunday morning occasion. ARRL President Kay Craigie, N3KN, told the gathering, "The Second Century is up to us," and expressed the hope that in another 100 years, the Amateur Radio community would reflect on the League's first century with respect and admiration.

"The weather was not so hot, but the atmosphere at Hamvention was as warm as ever," Craigie observed post-Dayton. "People were in a buying mood, both at the ARRL Expo and at the Hamvention in general. I talked to several vendors who were quite pleased."

Hara Arena was shrouded in fog as Hamvention opened on Friday, and cool, rainy weather — including some hail — prevailed initially, but by Saturday afternoon, the weather turned clear and brisk. While attendance numbers won't be available for a few weeks, some observers said the crowd seemed to be about the same size as last year's -- which was about 24,500. Others said the crowd seemed to thin more rapidly than in past years.

• Amateur Radio on the International Space Station (ARISS) school contacts and any incidental, casual operation from the station have been on hold because no licensed crew members had been aboard the ISS since May 12. That situation ended in late May, when Flight Engineer Alexander Gerst, KF5ONO,

of the European Space Agency, Flight Engineer Reid Wiseman of NASA, and Soyuz Commander Max Suraev arrived at the ISS after a May 28 launch from the Baikonur Cosmodrome in Kazakhstan. Russia has threatened to exclude US astronauts from Soyuz flights because of US sanctions in the wake of Russia's annexation of Crimea. Scheduled ARISS contacts are expected to resume in July. Wiseman, Suraev, and Gerst will remain aboard the station until mid-November.

• ARRL Media and Public Relations Manager Sean Kutzko, KX9X, has added new 30-second radio/audio public service announcements (PSAs) to promote Amateur Radio and the 2014 ARRL Field Day.

The spot named "Amateur" talks about the meaning of the word "amateur" and how the Amateur Radio Emergency Service (ARES) helps during disasters. It includes an 8-second "bed" at the end for local clubs to provide contact information. "Careers" tells how Amateur Radio skills can lead to a career path, and it references the ARRL website. "What Is Ham Radio" is a generic spot to promote how much fun Amateur Radio offers. It includes an 8-second bed at the end for a local club billboard.

Two PSAs for 2014 Field Day are available. One includes 8 seconds at the end for local clubs, one does not.

The PSAs for Promotions web page <a href="http://www.arrl.org/public-service-announcements">http://www.arrl.org/public-service-announcements</a> includes tips on how to get airplay for Amateur Radio PSAs.

(Excerpts from the American Radio Relay League's <arrl.org> web site)

# FCC Takes Action on Ownership Rules

>>> by Tom Smith

At the March 31st, the FCC took two actions concerning the broadcast ownership rules. The first action was for the Commission to issue a Notice of Proposed Rulemaking. This notice (http://www.gpo.gov/fdsys/pkg/FR-2014-05-20/pdf/2014-10870.pdf) is part of a Congressional mandate that the Commission conduct a review of the broadcast ownership rules every four years. It contains lengthy discussions of the current rules and suggested rule changes from comments that were made in previous ownership reviews. The only rule change that the Commission proposed was to change the contour for determining overlap of commonly-owned stations from the old analog grade B contour to the noise-limited contour used for DTV transmission in figuring coverage area.

The biggest surprise from the March 31st meeting was the Commission changing the rules concerning TV Joint Sales Agreements. The Commission considered the current rule as a way for TV stations to get around the rules concerning the number of stations one could own in a market. In the notice (https://www.federalregister.gov/ articles/2014/05/20/2014-10874/2014quadrennial-regulatory-review) the Commission ruled a station could not have a joint sales agreement with another station if the agreement supplied more than 15% of the second stations revenue. If the first station supplied more than 15% of the second stations revenue, the FCC would consider it as having an ownership stake in the second station. And because the FCC does not allow the ownership of two stations in a market with less than eight independent voices, the ownership on two TV station is prohibited in most markets unless the FCC grants a waiver due to hardship of the second smaller station. A hardship waiver would be granted if one of the stations was in bankruptcy or had a long history of losing

## Ownership >>> continued on page 7

#### Rulemakings

>>> continued from page 5

The FCC is seeking comments on the requirements for the methods and procedures needed for providing EAS messages in Spanish and other languages. Comments were due on May 28th and replies are due on June 13th.

#### FINAL RULEMAKING

#### ET Docket No. 13-49

Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band

On March 31st, the FCC adopted a Report and Order (<a href="http://transition.fcc.gov/Daily\_Releases/Daily\_Business/2014/db0401/FCC-14-30A1.pdf">http://transition.fcc.gov/Daily\_Releases/Daily\_Business/2014/db0401/FCC-14-30A1.pdf</a>) modifying the rules for operation in the 5 GHz unlicensed band.

In the order the FCC authorized the operation the 5.15-5.25 GHZ band for outdoor operation with increased power. The use of that band had been limited to devices that would operate indoors only. They also increased the band of 5.725-5.825 GHz to 5.725-5.850 GHz and extended the Part 15 rules to the whole band.

The FCC also issued rules to prevent interference to licensed users that share the band including requirements for the manufacturers to secure software from being modified to allow out of band operation and defeat the ability of the unlicensed devices to sense licensed transmissions which would require them to change frequency or cease operation. Fixed units operating in the 5.15-5.25 GHz band outdoors are required to maintain an antenna elevation below 30 degrees to protect satellite operation in that band.

These rules have been published in the Federal Register and became effective on June 2nd.

#### WBA SUMMER CONFERENCE ENGINEERING SESSIONS Wednesday, June 18th

This year's Workshop will be held in conjunction with the WBA Summer Conference at the Blue Harbor Resort in Sheboygan, WI. Engineering sessions start at 8:45am and end at 4:30pm followed by the Exhibit Reception and Dinner, all covered by your low-cost, single-day registration.

Book a hotel room now; they are filling up fast in this totally upgraded resort on Lake Michigan. See the WBA website for registration information.



#### **SESSIONS:**

7:00am Registration

8:40am **Opening Remarks** 

8:45am Cyber Security, Inside and

**Outside Your Network** 

9:30am Are You Intruder Proof? (Building Security)

10:30am High Voltage & RF Exposure Safety

11:15am Maximizing Transmission Performance

1:15pm POTS is Gone; What Now? 2:00pm Ask a Manager (Panel Discussion)

3:00pm Apps: We'll Show You Ours If You Show Us Yours

4:30pm End of Sessions







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#### **AUCTION**

>>> continued from page 1

After both the reverse and forward auctions end the FCC will reassign stations to new channels. Stations will have 3 months to file an application to modify their facilities after the date that the new allotment table becomes official and three years to complete construction. If construction is not completed and the station in not operating on its new channel at the end of the 39 months from when the new allocation becomes official, the station must go dark until construction is completed. If the station is dark after that year, the stations license will be canceled. Stations that are giving up their licenses or sharing a channel will have three months to either sign-off or start sharing a channel after payment is received. The wireless broadband providers will have to build out their systems to provide coverage to 40 percent of the population in their service areas within six years and 75 percent of the population with twelve years.

The new wireless band will start at channel 51 and go down. The staff did a presentation at the May 15th meeting and gave two options for the new wireless bands. One was for 84 MHz of spectrum going from channel 38 to channel 51. The existing channel 37 will remain basically the same with radio astronomy and medical telemetry devices using the band. Just above channel 37 will be a 3 MHz guard, 7 five-MHz downlink channels, an 11-MHz guard band and 7 five-MHz uplink channels. The other option is 120 MHz of wireless spectrum starting at channel 30 with a nine MHz guard band, 6 five-MHz downlink channels, a three MHz guard band Channel 37, another three MHz guard band, 4 more five-MHz downlink channels, eleven MHz guard band and 10 five-MHz uplink channels. The amount of spectrum for wireless will depend on how many station participate in the auction and the amount of spectrum that is available after the repacking. Unlicensed operation will be allowed in the guard bands.

Another action (http://www.fcc.gov/document/fcc-expands-license-eligibility-certain-wireless-microphone-users) at the May 15th meeting was that the Commission would allow professional sound companies and venues that use

more than 50 wireless microphones to become licensed and receive the same protections as part 74 users from TV white space devices.

The FCC also released a long list of future actions (http://transition.fcc.gov/Daily\_Releases/Daily\_Business/2014/db0515/DOC-327101A1.pdf) that they will proceed with concerning the incentive actions and TV repacking, They include seeking comments on the implementation of the auction rules, interference between TV and wireless, measures to aid in alleviating the impact on LPTV and translator displacements, unlicensed part 15 and TV white space use in the guard bands and on channel 37, and future wireless microphone needs in the long run in both the TV and other bands.

Leading up to the Incentive Auction rulemaking, the Commission released two reports, the first was released on March 20th called the Broadcast Transition Study produced by Widelity Inc. The report (http://transition.fcc.gov/Daily Releases/ Daily Business/2014/db0320/DA-14-389A2.pdf) listed the issues that surround the repacking transition including needs to station planning, modifications to towers with the related issues of zoning, lease arrangements and FAA approval. They examined the need for antenna and transmission line replacement, along with transmitter modification or purchase when moving to a new channel. Reimbursement and tax issues were discussed along with possible cost saving suggestions which may or may not be practical. There were a number of cost studies for individual stations transitions along with case studies for some of the major multi-station sites. The effect on cable and satellite providers was also covered.

The major concerns raised were that there may not be enough engineering talent such as RF and tower design engineers as well as tower crews and technicians to plan and build new facilities. They said that based on discussions with manufacturers, it was suggested that equipment could be delivered to meet the deadline for the transition. There was a 30-day comment period where the NAB and a number of manufacturers filed their views on the transition. The comments generally suggested that the Widelity Report did raise concerns about the

issues surrounding the repacking of the TV bands, but it did not grasp the severity of the problems that are likely. Because of the freeze in changes to TV stations transmitting facilities relating to the incentive auction, there has been little activity in the manufacturing or installation of towers, transmitter and antennas. This has caused a loss of providers of this equipment and of the people to plan and construct towers and the equipment needed. In fact, since this report was written last fall, ERI mothballed their TV antenna manufacturing plant and laid off a number of people and Stainless Tower closed their plant and sold the manufacturing equipment and will rely on outside manufacturing of their tower components.

Another report (http://apps.fcc.gov/ ecfs/document/view?id=7521095687) the FCC received was on the channel sharing test in Los Angeles. The report from the two stations involved stated that they were able to transmit over one transmitter two sets of program streams using two different PISP channel numbers. They were able to transmit two 720P HD signals and did tests that added two or more SD signals. They ended up running two 720 P signals with four SD channels or one 720P signal with up to seven SD signals successfully. But they had to use an encoder with statistical multiplexing for the video and ran audio as mono or stereo at reduced bit rates to be able to get favorable results.

According to Broadcasting and Cable, the full Report and Order should be coming out in the first week of June.

> July 2014 Chapter 24 Newsletter Deadline: Thursday, July 3 paul.stoffel@wpt.org

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#### Ownership

>>> continued from page 4

money. The FCC is giving stations two years to come into compliance with the new rules. Radio stations are allowed to use Joint Sales Agreements, but each agreement counts against the stations local ownership limits.

As fallout from this ruling Sinclair broadcasting has notified the FCC that they will be giving an existing license in the Charleston, SC market and two licenses in the Birmingham. AL market back to the FCC to be canceled if the purchase of a station they are buying in each of those markets gets approved. They had planned to sell the stations, but claimed they could not find buyers without Sinclair providing help and the new rules would prohibit them from entering into a Joint Sales Agreement that would provide that aid. Commissioners O'Rielly and Pai who voted against the action, issued a statement on how the ruling was counterproductive because it prevented an opportunity for minority ownership. In both markets Sinclair already owned two stations under the duopoly rules. The Charleston Market has five full-power commercial stations and is in market 98, Birmingham is market 44 and spread out over a number of cities with 11 commercial stations with two ABC and two CW stations. Given that Sinclair would have possible control of 3 stations in Charleston and 4 stations in Birmingham, it could have been difficult for Sinclair to get approval under the current rules.

Comments for the ownership rule review are due on July 7th with replies on August 4th.

#### **SBE RF Safety Course**

On June 24, the <u>SBE RF Safety</u> <u>Course</u> webinar will provide an overview of RF radiation issues and practices for broadcasters, including:

- \* Proving compliance at a broadcast site
- \* Biological effects of RF radiation and the distinct differences between RF radiation and ionizing radiation
- \* FCC and OSHA regulations what they are and what you need to do to comply
- \* Workplace hazards
- \* Transmitter sites
- \* SNG and ENG trucks
- \* Remote operations
- \* The unique issues at AM stations
- \* RF hazard protection equipment you may not need it but your contractors probably will
- \* Signs what they mean and what you need

Instructing the course is noted RF safety expert, Richard Strickland of RF Safety Solutions.

The completion of a webinar from Webinars by SBE qualifies for 1 credit, identified under Category I of the Recertification Schedule for SBE Certifications. This webinar is approximately three and half hours long. Fee for SBE Members is \$95. Fee for nonmembers is \$150. Register on-line at the SBE website. Direct questions to Kristin Owens via email or by phone at (317) 846-9000.

Thanks to Leonard Charles for maintaining the Chapter 24 web site and to Steve Paugh for mailing the meeting reminder postcards.

## **Certification Exam Session Dates**

For more information about SBE Certification, contact Jim Hermanson, Chapter 24 Certification Chair, services@jimhermanson.com or contact Megan Clappe, Certification Director at the SBE National Office at (317) 846-9000, or mclappe@sbe.org.

#### **EXAM DATES**

August 8-18, 2014 November 7-17, 2014

#### LOCATION

Local Chapters Local Chapters

#### APPLICATION DEADLINE

June 6, 2014 October 6, 2014



#### Recent Renewals:

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