



Society of
Broadcast Engineers
Chapter 24
Newsletter
Madison, Wisconsin



February 2014



Next Meeting

**WEDNESDAY
FEBRUARY 12**

WEB STREAMING APPLIANCES



Kevin Peckham and Eric Higgs of Full Compass Systems will describe a number of pre-package systems to make web-casting a plug and play install. These systems are known by the general term “streaming appliances”. Kevin and Eric will demonstrate a number of vendor solutions that will allow you to easily get your facility into webcasting from simple audio and camera setups to full production capabilities.

Dutch Treat Dinner at 5:30pm
Rocky Rococo Pizza & Pasta
7952 Tree Lane
(Mineral Point at Beltline)
(near Brothers Main Appliance)
Madison, WI

Meeting and Program at 7:00PM
Full Compass Systems
9770 Silicon Prairie Parkway
(use main entrance)
Madison, WI

BROADCAST ENGINEERING MAGAZINE REVIVED

>>> by Tom Smith

After ceasing publication at the end of October 2013, the *Broadcast Engineering* magazine title is being revived. Newbay Media, publishers of *Radio World*, *TV Technology* and *Broadcasting and Cable*, as well as a number of other media and audio-visual technical magazines announced on January 7th (<http://www.newbaymedia.com/broadcastvideo/>) that they were purchasing selected assets of *Broadcasting Engineering* including the trademark, web assets and subscriber lists. On January 31st, they sent an e-mail to *BE* subscribers that they would be debuting *TV Technology Broadcast Engineering Extra* in the coming weeks. While they gave no information about the future publication, it may be similar to the bi-monthly sister publication to *Radio World* called *Radio World Engineering Extra* which centers more on technical subjects while *Radio World* covers technical, programming and management subjects. The purchase of *Broadcast Engineering* by Newbay Media and its integration into *TV Technology* follows a similar pattern after other broadcast technical and other media magazines ceased publication.

About 25 years ago, *Broadcast Management/Engineering (BM/E)* ceased publication and was revived as a section of *Broadcast Television*. In the early 2000s, *Broadcast Television* ceased publication and was revived as a section of *TV Technology*. In both cases, the sections named after the *BM/E* and *Broadcast Television* disappeared after a period of time. Newbay Media did not own *TV Technology* at the time *Broadcast Television* was absorbed. Newbay Media purchased the magazine *Radio* from the

same publisher that published *Broadcast Engineering* and continues to publish that magazine as a separate publication and website, which may give some indication to how they may handle the purchase of *Broadcast Engineering*. We should find out in the next few weeks.

INCENTIVE AUCTION TIMELINE PRESENTED

>>> by Tom Smith

At the January 30th meeting of the FCC, a presentation (http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0130/DOC-325343A1.pdf) was made to the Commissioners giving a probable timeline for the final rulemaking for the Incentive Auction of the 600 MHz band for wireless use that is currently occupied by broadcast TV. In the 15-page presentation, information was presented on past rulemaking deadlines and web presentations, as well as issues that still need to be addressed, including defining what type geographic markets the auctions will cover. The FCC auctions spectrum based on different sizes of markets which can vary by dividing the markets by cities and surrounding areas, by a larger area of

AUCTION >>> continued on page 3



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Coming Up

Thur., Mar. 13	Acoustics— Last call for nominations
Wed., April 16	TBD— Elections
Wed., May 14	NAB Wrap-Up



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Meeting Minutes

from the January 2014 Business Meeting

The SBE Chapter 24 January meeting was cancelled due to inclement weather. The evening's program, John Calder of Minnesota-based Acoustic Geometry, is rescheduled for March 13.

FCC STARTS GRANTING LPFM PERMITS

>>> by Tom Smith

The FCC started to grant construction permits for new LPFM stations starting in the middle of January. This was two months after the close of the application window for LPFM stations. These grants followed a period that started during Thanksgiving week where the FCC started to dismiss LPFM applications that were deficient. These applications were dismissed due to not meeting spacing requirements to full-power stations, existing translators or other LPFM stations, not properly filled out, or not meeting requirements for LPFM station ownership.

So far the FCC dismissed applications for stations in Lacrosse and Green Bay while the FCC granted applications for stations in Port Washington, Hudson, Rice Lake, Stanly Boyd-Cadott, Fond du Lac, Wisconsin Rapids, Hager City and Oconto Falls, two stations in Waupaca and one station in Milwaukee. In the Madison area, permits were granted to Lussier Community Center (95.5 MHz) with transmitter at the Lussier Community Center next to Memorial High, City of Monona ((98.7 MHz) with transmitter at Monona-Grove High, Sun Prairie Kids TV Foundation (103.5 MHz) with transmitter at Sheenan Park water tower. In Janesville the group UUA was granted 103.5 MHz, also with a transmitter at Milwaukee and Wisconsin Streets and in Waterloo, Wisconsin Christian Radio Corporation was granted 96.7 MHz with transmitter located a

couple of miles east of Waterloo. Also recently granted to the Madison area were FM translators to Clear Channel Radio at 100.9 MHz with transmitter at the Community Tower and Sister Grace at 99.5 MHz with transmitter near Interstate 39 and Highway 12/18.

Note: Transmitter sites found using FCCINFO.Com Google Earth mapping program.

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FCC Rulemakings
compiled by Tom Smith

ET Docket No. 14-14

Office of Engineering and Technology Seeks to Supplement the Incentive Auction Proceeding Record Regarding Potential Interference between Broadcast Television and Wireless Services

GN Docket No. 12-268

Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions

On January 29th, the Office of Engineering and Technology for the FCC released a notice (http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0129/DA-14-98A1.pdf) seeking comment of the method to be used for determining interference between TV broadcast stations and wireless facilities when spectrum is shared between TV broadcast stations and wireless providers in adjacent markets. As part of the Incentive Auction process and the repacking of the TV band, it is planned that some channels may be used for both wireless and TV broadcasters.

In the discussion and attached appendix, four different interference possibilities are raised including TV transmitter into wireless base station receiver, TV transmitter into wireless user's receiver, wireless base station transmitter into TV receiver and wireless user's transmitter into TV receiver. The various potentials for interference depend on how the wireless band is allocated and the number of TV stations that remain after the auctions in the 600 MHz band. If both the wireless and TV transmitters in adjacent markets are using the same frequencies, the interference potentials are reduced as they operate similar to TV stations do in adjacent markets. The next issue is how to figure separation between wireless transmitters and TV transmitters. Past comments have suggested mileage separations like those used in past TV allocations and currently used for FM allocations. The FCC would like to use

Longley-Rice calculations as this would allow denser packing of wireless and TV coverage areas. They asked in the notice if this is feasible. Other issues raised include using additional criteria for computing Longley-Rice parameters and the effect of using different methods of wireless systems.

There will be a FCC webinar on February 21st and comments are due on February 28th.

AUCTION >>> continued from page 1

composed several cities which could cover part of a state or parts of several states, a large market that includes all of a number of states, or finally a license that covers the whole nation. Other issues include interference issues that may occur if wireless and TV share the same spectrum in adjacent markets and repacking feasibility issues. The new webinars concerning repacking on February 21st in the morning and interference between wireless and TV on February 21st in the afternoon were also noted. The presentation has a project-management-type chart that gives the timetable for the rulemakings, computer tests and the actual auction. The proposed rulemaking notices and the final rulemaking for the technical issues of reallocating the 600 MHz band will be made in the first half of this year, with the auction mechanics made in the second half of the year. Applications to participate in the auction will start shortly into 2015, with the auction mid-year, and payments and licensing in the fall of 2015.



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Amateur Radio News

compiled by Tom Weeden, WJ9H

Ham Radio CubeSats Launched to ISS

An unmanned Orbital Sciences Corp Antares rocket that blasted off from NASA's Wallops Island launch pad on Virginia's Eastern Shore January 10, carried aloft an Orbital Sciences Corp (OSC) Cygnus freighter with a bevy of Amateur Radio CubeSats aboard, bound for the International Space Station (ISS).

"We're in good shape," Orbital Sciences Executive Vice President Frank Culbertson told reporters after launch. The launch had been delayed twice, first by cold weather and then by high radiation levels due to a massive solar flare on January 7. Both events could have affected critical rocket systems.

The Cygnus freighter rendezvoused and docked with the ISS on January 12. The four Amateur Radio CubeSats are LituanicaSat-1, LitSat-1, ArduSat-2, and UAPSat-1. Other satellites also are onboard. LituanicaSat-1 carries a 145/435 MHz FM transponder, while LitSat-1 is thought to carry a 435/145 MHz linear transponder for SSB/CW. UAPSat-1 will carry an AX.25 145/437 MHz packet digipeater. ArduSat-2 will downlink 9.6k MSK CCSDS data format on 437 MHz.

The CubeSats are expected to be deployed from the ISS in the coming months. The January 10 launch marks the first of eight OSC cargo resupply missions to the ISS for NASA. --Thanks to Southgate Amateur Radio Club and Orbital Sciences Corp

ARRL Reply Comments Cite "Fundamental Misunderstanding" of "Symbol Rate" Petition

The American Radio Relay League's petition proposing to drop the symbol rate limit for digital modes (RM-11708) remains on the FCC's list of "Most Active Proceedings." More than 800 comments were filed as of January 7, some of them posted after the December 23 cut-off date and most favoring the ARRL's proposal.

The ARRL earlier filed comments with the FCC on its own Petition (plus Erratum). The ARRL said comments opposed to its initiative reflect a "fundamental misunderstanding" of the petition's intent. RM-11708 proposes to drop the symbol rate limit in §97.307(f) of the FCC Amateur Service rules, substituting a maximum occupied bandwidth of 2.8 kHz for HF data emissions.

The ARRL said those opposing the Petition do not, in general, challenge the removal of the symbol rate limit for data emissions in band segments where RTTY and data emissions are now permitted. Some of those opposing its petition, the ARRL said, expressed the belief that the proposed rule change would impose wider-bandwidth data emissions in spectrum where narrow-bandwidth modes such as CW and PSK31 now operate, to the detriment of the narrow-bandwidth modes. Other opponents contended that the Petition will benefit a few operators at the expense of the many now operating narrowband data, RTTY, and CW on the HF bands.

Given state-of-the-art data technologies, the League said, there is no necessary correlation between the symbol rate and the bandwidth of a data emission. The current symbol rate "acts only as a limit on the efficiency of data emissions in the HF bands as a practical matter, and as an artificial and arbitrary filter on the types of emissions that can be utilized by radio amateurs."

Its Petition, the ARRL concluded, "is not a referendum on the value of MF or HF data emissions or data experimentation in those bands," but intended to encourage experimentation now restricted artificially by outdated rules. "It is instead a proposal to delete outdated limitations on Amateur Radio experimentation, which Commission policy supports, and which the basis and purpose of the Amateur Radio Service necessitates."

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



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Notice of Elections

By Steve Paugh, Nominations Chair

In April we will hold elections for Chapter 24 offices of Chair, Vice-Chair, Secretary and Treasurer for the 2014-2015 terms. All interested members of Chapter 24 who are current in their dues are eligible to run for elected office. The nominations committee has accepted the following members for nomination. Our current slate of officers for the 2014-2015 period is:

Chair-	Kevin Trueblood	has accepted the nomination
Vice Chair-	Kevin Ruppert	has accepted the nomination
Treasurer-	term limit reached	open for nominations
Secretary-	Pete Deets	has accepted the nomination

Call For Nominations

We are actively seeking nominations for the office of Treasurer. During the February 12nd meeting, the nominations committee will solicit the members present for additional nominations. If you would like to run for an office, or know someone who wishes to run, please bring it to the attention of the nominations committee. All nominees are requested to submit a short biography for publishing with the ballot. The nominations committee consists of Steve Paugh (Chair), Mike Kulis and Leonard Charles.

Appointed Officers

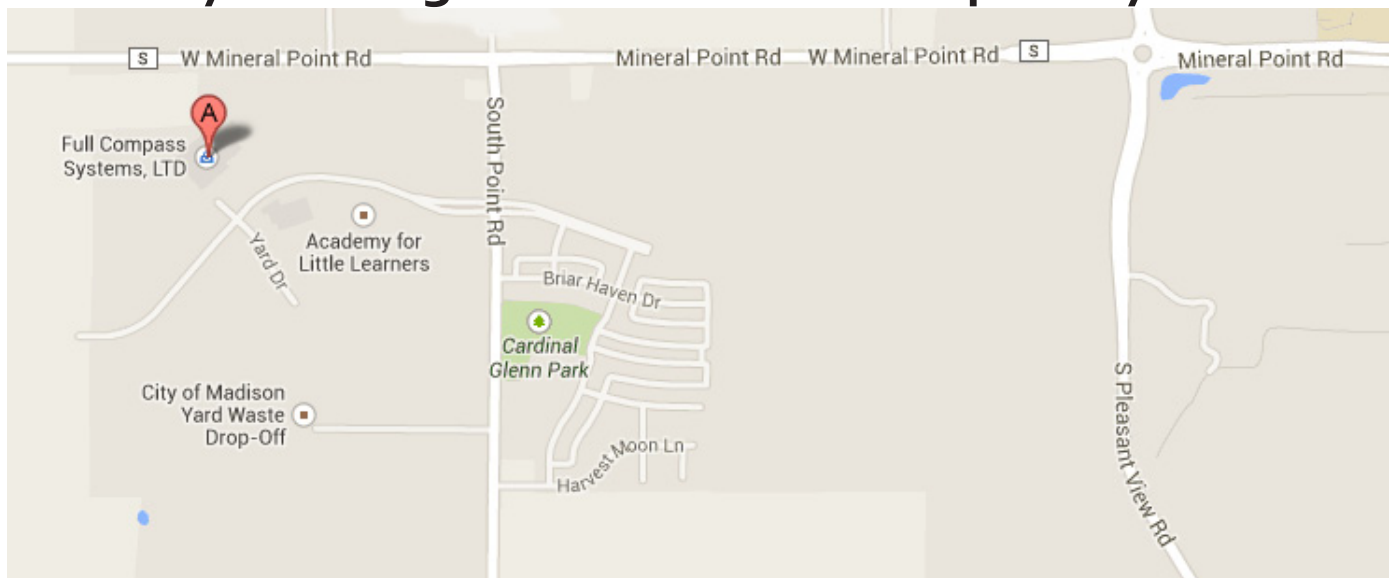
The appointed offices do not fall under the jurisdiction of the nominations committee and are appointed by the Chair of Chapter 24. Traditionally, the existing appointed officers continue for another term automatically. If you are a current appointed officer and would like to step down, please contact the current Chapter Chair Kevin Trueblood. If you would like to serve as an appointed officer please make your desire known to the Chair.

The current appointed offices are Program Committee Chair- Steve Paugh, we have two vacancies on the Program Committee, Newsletter Editor- Paul Stoffel, Membership- Paul Stoffel, Sustaining Membership- Fred Sperry, Certification and Education- Jim Hermanson, Frequency Coordination- Tom Smith, Webmaster- Leonard Charles and National Liaison- Leonard Charles.

Ballots

Thanks to the efforts of nominations committee member Leonard Charles, we will again have on-line voting! We will also publish the ballot in the April on-line newsletter. You can either vote on-line or print the on-line ballot and mail it in to the Nominations Chair. Ballots will also be available at the April meeting for on-site voting. The deadline for nominations and the submission of biographies will be March 21st 2014.

February meeting location at Full Compass Systems



SBE members qualify for discount NAB Show registration

Through a special arrangement with the NAB, members of the SBE who are not eligible for the NAB member rate through their employers are able to receive a \$100 discount off full-conference registration for the 2014 NAB Show.

Register at the NAB show website. Use the special SBE code, EP06 in the appropriate field when completing your registration. The same code may also be used to get a free exhibits-only registration. The SBE is a conference partner with the NAB, helping to produce the NAB Broadcast Engineering Conference at the 2014 NAB Show.



<http://www.sbe.org/sections/SBEUniversity.php>



http://www.sbe.org/sections/cert_exam_prep.php

SBE Bookstore

Browse books by title at: http://www.sbe.org/sections/store_books_listings.php



March 2014 Chapter 24 Newsletter Deadline: Monday, March 3 paul.stoffel@wpt.org
edited using Adobe InDesign CS4

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

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CHAPTER 24 SUSTAINING MEMBERS

Recent Renewal:

- Clark Wire and Cable
- Ross Video
- Scharch Electronics
- Sound Devices, LLC

Thanks to all our Sustaining Members:

- Alpha Video
- AVI Systems
- Belden, Inc.
- Full Compass Systems
- GEPCO International, Inc.
- Heartland Video Systems
- Ikegami Electronics (USA), Inc
- Joseph Electronics
- maney-logic
- Resonant Results, Ltd.
- Token Creek Productions
- WISC-TV 3
- WMTV-TV 15
- WKOW-TV 27
- WMSN-TV 47
- Wisconsin Public Television

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	LOCATION	APPLICATION DEADLINE
April 8, 2014	NAB Convention	March 31, 2014
June 6-16, 2014	Local Chapters	April 11, 2014
August 8-18, 2014	Local Chapters	June 6, 2014