



July 2014

Society of  
Broadcast Engineers  
Chapter 24  
Newsletter  
Madison, Wisconsin



## Next Meeting

Tuesday, July 15

# STORAGE TECHNOLOGY

For our July program, Jim Hermanson will offer a presentation on storage technology. Various types of storage will be examined, from small to large. Clouds, spinning disks and solid-state storage will be compared. Some preventive and pro-active tips to keep your data safe will be shared.



The goal of the program will be to take away something useful to support your professional and/or personal storage systems.

Dutch Treat Dinner 5:30 PM  
Culvers Frozen Custard  
2102 W. Beltline (north frontage road)  
Madison, WI  
(no reservation - just gather together)

Meeting and Program at 7:00PM  
Wisconsin Public Broadcasting Center  
3319 W. Beltline Hwy  
Madison, WI

Visitors & Guests are welcome at all Chapter 24 events!

## Auction Rule Released

>>> by Tom Smith

On June 2nd, the FCC released the full Report and Order ([http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0627/FCC-14-50A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0627/FCC-14-50A1.pdf)) for the rulemaking on the Incentive Auction for the 600 MHz band currently occupied by television broadcasters. They adopted the rules on May 15th. The full notice runs 484 pages. It covers the technical rules for the new wireless services, the repacking of television stations in the new smaller TV band, unlicensed operations, how the auctions will be conducted, the transition of the TV stations to operate in their new bands, and the start of the wireless services in the new bands.

The new wireless band will start at TV channel 51 and go down from there. The wireless providers participating in the auction will bid on two 5 MHz blocks, one for uplinking and one for downlinking. The upper part of the band will be the uplink service which carries the transmission from the consumer's device to the provider's base station. The lower part of the band will be the downlink service which will carry the transmission from the provider's transmission tower to the consumer's device. The two bands will be separated by an 11 MHz guard band. That guard band will be available for the use of unlicensed devices. There will be a second guard band below the downlink channels that will vary between 3 and 11 MHz depending on how much spectrum is made available and how the number of channels that can be placed in the spectrum that is made available. If any wireless spectrum is assigned adjacent to TV channel 37 which is used for radio

**AUCTION** >>> continued on page 4

## The Broadcasters Clinic

>>> by Leonard Charles, Chair

Do you know the latest on the TV Spectrum Auction? Are you interested in the testing that's been done exploring the possibility of an all-digital AM band? These cutting edge subjects and a lot more will be covered in depth at this year's Broadcasters Clinic. You'll want to reserve your seat early so you don't miss out on the latest industry technology advances and updates, as well as a strong vendor exhibit floor. It's the next best thing to attending the annual NAB conference, and its right here in Madison.



Please see this year's session agenda included in this newsletter on page 7. Mark your calendar now for October 21st, 22nd, and 23rd at the Madison Marriott West. We look forward to seeing you there.

## Coming Up

- Wed., Aug. 13 AJA — Joseph Electronics
- Thur., Sept. 18 Troubleshooting Ancillary Data
- Wed., Oct. 22 Broadcasters Clinic

## In this Issue

- 2014 Radio Show.....2
- Proposed Rulemakings.....2
- Amateur Radio News.....4
- 2014 Clinic Agenda.....7
- Certification Exam Dates..... 8



## Chapter Contacts

### Chair

Kevin Trueblood  
Wisconsin Public Radio  
608-345-3248  
kevin.trueblood@wpr.org

### Vice Chair

Kevin Ruppert, WISC-TV  
W: 608-271-4321  
kruppert@wisctv.com

### Secretary

Pete Deets, WMTV  
W: 608-274-1515  
mldeets@nbc15.com

### Treasurer

Leonard Charles  
608-271-4321  
lcharles@wisctv.com

### Past Chair

Bill Hamilton, CW57 (WBUW)  
608.957.2449  
bill@cw57.tv

## Committee Appointees

**Program Committee**  
Steve Paugh 277-5139  
spaugh@wisctv.com  
*Volunteer for the  
program committee!*

**Membership / Newsletter Editor**  
Paul Stoffel  
paul.stoffel@wpt.org

**Sustaining Membership**  
Fred Sperry  
608-264-9806  
fred.sperry@ecb.org

**Certification & Education**  
Jim Hermanson  
services@jimhermanson.com

**Frequency Coordination**  
Tom Smith  
608-837-2729  
tcsmith100@frontier.com

**Webmaster**  
Leonard Charles  
W: 608-271-4321  
F: 608-271-1709  
lcharles@wisctv.com



# Meeting Minutes

from the June 2014 Business Meeting

Chapter 24 of the Society of Broadcast Engineers met on June 13th in Prairie Park in Verona for the annual family picnic. Steve Paugh was the grill master and Kevin Ruppert provided the vinyl tracks for nostalgic ambience.

There was a very short Chapter business meeting held which included the committee reports of those committee chairs present. Reports from the Frequency Coordination, Certification, and Program committees were heard. There was also a report from the Treasurer and the National Liaison. Chapter Chair Kevin Trueblood conducted the meeting then adjourned for more brats, burgers, and relaxation.

*Minutes taken by Leonard Charles*

## 2014 Radio Show includes more for the engineer

The 2014 RAB/NAB Radio Show will feature an increased number of technology sessions for broadcast engineers, co-produced by the SBE with NAB and NAB Labs. The Radio Show will be held in downtown Indianapolis, Ind. on September 10-12 at the Indiana Convention Center. Members of the SBE can register at NAB member rates.

Technology sessions for engineers will include:

- A special half-day tutorial by Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE of Texas A&M University - "IT for Radio Engineers: Understanding IP Networking Routing & Switching Tutorial."
- "Designing, Maintaining and Monitoring Reliable IP Audio Broadcast Facilities", by Jake Robinson, Director of Engineering and IT at Emmis Communications.
- Radio veteran Chriss Scherer, CPBE, CBNT will moderate a panel of expert radio engineers including Jeremy Ruck, Jeremy Ruck & Assoc.; Paul Shulin, CBRE, Greater Media Boston, and Jake Robinson, who will provide "15 Tech Ideas That Help the BottomLine".
- "All-digital on the AM Band - Testing for the Future", will be presented by NAB Labs.
- "Hybrid Radio - Why It's Important for You", presented by NAB

SBE Certification Exams will be offered at the Radio Show. Pre-registration is required by August 22 and SBE Certification Exam Applications are available at the SBE website. The exam session will be held on Thursday, September 11 from 2-5 pm. SBE recertification credit will also be available to those attending the Technology Sessions.

More information about the 2014 Radio Show, including sessions, schedule, exhibits, special events and how to register are available at the NAB website.



# PROPOSED RULEMAKINGS

## EB Docket No. 04-296 Review of the Emergency Alert System

On June 25th, the FCC adopted a Notice of Proposed Rulemaking ([http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0630/FCC-14-93A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0630/FCC-14-93A1.pdf)) concerning the Emergency Alert System. It covers two issues with the EAS systems: national alerts and presidential messages and tests, header codes and visual and audio accessibility.

Based on the results of the national test that took place on November 9, 2011, the FCC is proposing a number of rules and changes to the EAS system. They include a nationwide location header code, a national periodic test header code, immediate retransmission of national alerts and tests (no store and forward) and electronic filing of the results of a national test to the FCC. The FCC is also proposing that each state plan provide the FCC a computer readable form of each station's monitoring assignments including primary backup paths. The FCC also wants EAS equipment manufacturers to clean up their programming to eliminate shortcuts in header codes which may cause the decoder to ignore some header codes and not recognize incoming messages.

To deal with accessibility issues, the FCC is proposing that video crawls be of legible font, be at a readable crawl speed, not run off the screen, not block important visual information and run for the duration of the EAS activation. For audio, they are proposing that any audio in the alert convey identical or at least comparable text to the crawl.

Comments will be due 30 days after publication in the Federal Register, with replies due 15 days after.

## MD Docket No 14-92 Assessment and Collection of Regulatory Fees for Fiscal Year 2014

Once again it is the time of year that the FCC issue it's Notice of Proposed Rulemaking ([http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0613/FCC-14-88A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0613/FCC-14-88A1.pdf)) on its collection of regulatory fees from all the licenses that use the various bands of spectrum. Other than changes in the amounts, due to inflation, there were two significant changes.

In the first change, the FCC is no longer going to have separate fees for VHF and UHF TV stations. TV stations will be listed as Digital TV and the fees will only vary by market size. In the second change, AM stations in the 1610 to 1700 MHz expanded band will have to pay a regulatory fee for the expanded band station if they still operate a station on their original standard band frequency.

The expanded band station was originally paired with an existing AM station and the original AM band station was to be shut down after a 5-year transition period. Some owners got a waiver to continue to operate on the original AM band station past that 5-year transition and the FCC is now considering them two separate stations and charge the regulatory fees accordingly. Comments on the fee structure are due on July 7th and replies due on July 14th.

7847 BIG SKY DRIVE  
MADISON, WISCONSIN 53719  
(608) 833-0047 • FAX (608) 833-5055

**James Daniels, Jr. (J.D.)**  
Midwest Regional Sales Manager

IKEGAMI ELECTRONICS (U.S.A.), INC.  
16206 Hunter Court, Orland Hills, IL 60487

Tel: (708) 460-1451      www.ikegami.com  
Fax: (630) 248-5185      E-mail: [jdaniels@ikegami.com](mailto:jdaniels@ikegami.com)

MADISON CBS WISC-TV 5

Shane Collins  
Clark Wire & Cable Sales  
Unit A  
408 Washington Blvd  
Mundelein, IL 60060-4401  
(800) CABLE-IT  
(847) 949-9944  
Fax: (847) 949-9595  
e-mail: [sales@clarkwire.com](mailto:sales@clarkwire.com)  
[www.clarkwire.com](http://www.clarkwire.com)

Antenna System Specialist

TV		Troubleshooting
FM		Sweep Testing
AM		Infrared Testing

[www.ResonantResults.com](http://www.ResonantResults.com)  
Richard Wood      (608)839-3950

**SOUND DEVICES**

Portable, Professional Audio

Sound Devices, LLC  
E7556 State Rd. 23/33  
P.O. Box 576  
Reedsburg, Wisconsin 53959  
[www.sounddevices.com](http://www.sounddevices.com)  
Phone: (608) 524-0625  
Fax: (608) 524-0655

**Token Creek**  
**MOBILE TELEVISION**

**John Salzwedel**  
President

501 Moravian Valley Road, Waunakee, Wisconsin 53597  
Phone: (608) 849-4965 Fax: (608) 849-4035 Cell: (608) 235-9632  
Web Page: [www.tokencreek.com](http://www.tokencreek.com) E-Mail: [john@tokencreek.com](mailto:john@tokencreek.com)

5727 Tokay Boulevard  
Madison, Wisconsin 53719

(608) 274-1234  
Fax: (608) 274-9514

Heartland Video Systems, Inc.

1442 Pilgrim Road  
Plymouth, WI 53073  
Tel (800) 332-7088  
(920) 893-4204  
Fax (920) 893-3106  
[nbart@hvs-inc.com](mailto:nbart@hvs-inc.com)  
[www.hvs-inc.com](http://www.hvs-inc.com)  
[www.hvs-dtv.com](http://www.hvs-dtv.com)

Mark Bartolotta

**DIGITAL SOLUTIONS**  
Broadcast/Professional



# Amateur Radio News

compiled by Tom Weeden, WJ9H

- A *Dnepr* launch vehicle carried several Amateur Radio payloads aloft from Russia on June 19. The 37 spacecraft for research and commercial applications, about one-third of them carrying Amateur Radio packages, marked a new record for the most spacecraft launched by a single rocket. Among the Amateur Radio payloads now in orbit is FUNcube-3, a transponder-only payload on the QB50 precursor CubeSat, QB50p1. (The QB50 program plans to launch a constellation of 50 small science research satellites.) FUNcube-3 carries an inverting 400 mW SSB/CW transponder, with an uplink passband of 435.035-435.065 MHz (LSB) and a downlink passband of 145.935-145.965 MHz (USB). In the hours immediately following the launch, signals were reported from 10 of the satellites.

One of the packages, ANTELSat, is the first Uruguayan satellite. It carries a telemetry downlink and a command uplink (437.575 MHz 1200 bps AFSK) with a 2403.000 MHz (1 Mbit GFSK/MSK) downlink for payload data, and a 437.280 MHz CW beacon.

- The FCC's recently announced revisions to the Part 97 Amateur Radio rules governing exam credit to former licensees, test administration, and emission types will go into effect on Monday, July 21. The new rules were published in The Federal Register on June 20. <<http://www.gpo.gov/fdsys/pkg/FR-2014-06-20/pdf/2014-14414.pdf>> Earlier in June, the Commission announced that it would grant examination credit for written elements 3 (General) and 4 (Amateur Extra) to holders of "expired licenses that required passage of those elements." The FCC will require former licensees falling outside the 2-year grace period to pass Element 2 (Technician) in order to be relicensed. The Commission declined to give exam credit to holders of expired Certificates of Successful Completion of Examination (CSCs) or to extend lifetime validity to CSCs.

The FCC also embraced the use of remote testing methods, allowing volunteer examiners and volunteer examiner

coordinators "the option of administering examinations at locations remote from the VEs." The National Conference of Volunteer Examiner Coordinators (NCVEC) in 2002 endorsed experimental use of videoconferencing technology to conduct Amateur Radio testing in remote areas of Alaska.

In addition, the FCC adopted an American Radio Relay League (ARRL) proposal to authorize certain Time Division Multiple Access (TDMA) emissions in the Amateur Service. The Wireless Telecommunications Bureau in 2013 granted an ARRL request for a temporary blanket waiver to permit radio amateurs to transmit emissions with designators FXD, FXE, and F7E, pending resolution of the rulemaking petition. That waiver becomes permanent on July 21.

The Commission also made "certain minor, non-substantive amendments" and corrections to the Amateur Service rules.

- Some lucky — and happy — participants in the ARRL's "Field Day" exercise on the last weekend in June managed to snag a contact with NASA Astronaut Reid Wiseman, KF5LKT, operating from NA1SS on board the International Space Station. Wiseman, who just came aboard the space station this spring, seemed to have fun working the pileup.

"Enjoyed ARRL FD 14," Wiseman said on Twitter. "I operated from the ESA Columbus module. So many calls!" Wiseman used NA1SS on the standard VHF frequencies of 144.49 MHz up and 145.80 MHz down. It's not yet known how many stations he was able to contact.

One Field Day group that was fortunate enough to connect with the ISS were the Boy Scouts of Raymore, Missouri, Troop 32. "I bet the boys could be heard up in orbit even without a radio when Reid answered our call!" Scout Leader Jim Reicher, W0HV, said afterward. (Excerpts from the American Radio Relay League's <[arrl.org](http://arrl.org)> web site)



## AUCTION

>>> continued from page 1

astronomy and medical telemetry, the 3 MHz guard band will be used to protect those users from interference from wireless users. Otherwise 7, 9 or 11 MHz guard bands will be used to separate TV transmissions from the wireless band. The different guard bands are due to the difference between TV's 6 MHz channels and wireless's 5 MHz channels which will leave varying amounts of excess spectrum depending on the amount of spectrum assigned for wireless use. The positioning of the uplink and downlink bands is to place the uplink channels in the 600 MHz band next to the uplink channels in the 700 MHz wireless band and to allow both the wireless base station transmitters and TV transmitters to operate in adjacent markets on the same frequencies as not all markets will have the same amount of wireless and TV spectrum after the auction. The wireless spectrum will be auctioned off by Partial Economic Areas ([http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0602/DA-14-759A4.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0602/DA-14-759A4.pdf)) of which there are 416 and they vary in size from the metropolitan area of a city to several counties. In the western part of the nation they may cover a sizable portion of a state.

The wireless providers will have a license term of 12 years with the expectation of renewal. They will have to cover 25% of the population of their service area within 6 years and 75% within 12 years. Failure to do so can result in loss of license. The FCC set transmission standards similar to that in the 700 MHz band. The FCC has already changed the allocation table to have mobile and fixed wireless as a share service with TV broadcast from 512 - 608 MHz and 614-698 MHz which is channel 21 to channel 51, with channel 37 exempt.

Here is a chart from an appendix in the notice on interference within the reconfigured wireless band and the need to have the guard bands. This chart gives a good view on how the repurposed band would look depending on the amount of spectrum that is available for wireless use.

AUCTION >>> continued on page 5

**AUCTION >>> continued from page 4**

2	42	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	11	A	B	11	A	B	700 MHz UL					
3	48	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	7	A	B	C	11	A	B	C	700 MHz UL				
4	60	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	9	A	B	C	D	11	A	B	C	D	700 MHz UL				
5	72	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	11	A	B	C	D	E	11	A	B	C	D	E	700 MHz UL				
6	78	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	7	A	B	C	D	E	F	11	A	B	C	D	E	F	700 MHz UL			
7	84	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	3	A	B	C	D	E	F	G	11	A	B	C	D	E	F	G	700 MHz UL		
8	108	21	22	23	24	25	26	27	28	29	30	31	32	11	A	B	3	37	3	C	D	F	F	G	H	11	A	B	C	D	E	F	G	H	700 MHz UL		
9	114	21	22	23	24	25	26	27	28	29	30	31	7	A	B	C	D	3	37	3	E	F	G	H	I	11	A	B	C	D	E	F	G	H	I	700 MHz UL	
10	126	21	22	23	24	25	26	27	28	29	9	A	B	C	D	E	F	3	37	3	G	H	I	J	11	A	B	C	D	E	F	G	H	I	J	700 MHz UL	
11	138	21	22	23	24	25	26	27	11	A	B	C	D	E	F	G	H	3	37	3	I	J	K	11	A	B	C	D	E	F	G	H	I	J	K	700 MHz UL	
12	144	21	22	23	24	25	26	7	A	B	C	D	E	F	G	H	I	J	3	37	3	K	L	11	A	B	C	D	E	F	G	H	I	J	K	L	700 MHz UL

Television’s part in the auction will be more complicated. First stations wishing to participate in the incentive auction will have to choose what route they want to take. They can give up their license, share a channel with another station, move from UHF to high band VHF, move from UHF to low band VHF or move from high band VHF to Low band VHF. The FCC is requiring at least two stations in a DMA to participate in the auction. If there is only one station, they will be subject to repack like all the other stations. A station may drop out of the auction at any time and will then become subject to the repack. The FCC will set a starting price they are willing to pay for stations to agree to the option they choose. Because the FCC hopes that more stations join the auction than they need to give up channels, the stations will be asked to take a lesser amounts as bidding progresses with some of the stations dropping out when the price becomes less than they wish to receive. When the price gets as low as everyone wishes to accept and the bidding stops, then the reverse auction is over. The FCC will then determine the amount of spectrum available and start the repacking process. This is where there may be some controversy. The law that Congress passed says that the FCC must provide reasonable efforts to provide similar coverage to TV stations after the repack. The FCC has been modifying the OET-69 method of computing coverage which the NAB has objected to saying that the data used is not the same as when the rulemaking started and will not provide the same coverage after the repack. The FCC has also started to question what reasonable replication of

coverage is. From Paragraphs 125 and 126, the Commission seemed to say that preserving the exact coverage area of a TV broadcaster is not reasonable if it could prevent the repurposing of the spectrum. The following quotes from the rulemaking suggest that attitude.

In paragraph 125 the FCC stated, “By way of example, efforts that would preserve broadcasters’ coverage areas and populations served, but would prevent us from repurposing spectrum, would not be “reasonable” in the larger context of the Spectrum Act.”

In paragraph 126 the FCC stated, “Under our reading of the statute, the Commission could not satisfy its statutory obligation if it undertook only one of several reasonable actions to preserve broadcasters’ coverage areas and populations served. “All,” however, have no bearing on whether any particular effort is “reasonable” and thus does not require the Commission to ignore the other objectives of the Spectrum Act when conducting the repacking process.”

Why is this important for the broadcasters. The first issue is that the FCC is allocating the channels based on coverage contours which are based on desired to undesired signal ratios. This is a system similar to how AM radio stations are assigned which is different than how TV and FM stations were historically assigned. They were assigned using fixed mileage separations. By using the contour method, issues can arise if the undesired signal is too strong in relation to the desired signal by creating interference which will affect the reception of the viewers’ desired station. What this could also mean to broadcasters is that while a

station may end up with nearly the same amount of homes served, some of them could be from another DMA which could affect market ranking and possible sources of advertising revenue.

The FCC will not issue a notice of rulemaking when making the new TV allocations. They will make their computer runs, determine the best scenario and then issue the table. Stations may ask for an alternative channel after the table is issued if one is available. Stations will have three months to file their applications for a construction permit and then three years for all station to complete construction after which stations will have to cease operation on their pre-auction channel. If construction is not complete at the end of the three years, they will have one more year to complete construction or lose their license. They would be dark during that time because they would no longer be able to use their pre-auction channel. While not fully explained, the FCC plans on stations in a region to move to their new channels in a wave which would mean that many stations would have to complete construction before the three year deadline. This is to prevent interference between stations operating on the new and old channels and to allow the wireless providers to start operations earlier. Stations that are giving up their license and those sharing a channel will have to cease operation or start to share within 3 months of receiving payment from the FCC.

Stations that are changing channels will be compensated by the government. They will be required to provide the

**AUCTION**

>>> continued from page 5

FCC with an estimate of costs which will be paid out as construction progresses. Stations will have to file the necessary paperwork, including all bills and invoices, and will be subject to audit including visits to check on purchases. The FCC will also require justification for new equipment. They want to know if a transmitter can be retuned or is it necessary to purchase a new one or if the transmission line really needs to be replaced. Cable and satellite companies will also be reimbursed if they have to purchase new receiving equipment to receive stations that are on their new channels. Translators, LPTV, wireless microphone users and broadcast auxiliary stations will not be reimbursed for any of their costs. Broadcast auxiliary stations are point-to-point systems that are used to relay TV programming and use UHF channels. They are mostly used to relay programming to translators.

Other changes under the new rules are the allowing of wireless microphones and unlicensed TV broadband devices in the guard bands and on channel 37 on a non-interference basis and the elimination of the two reserved channels for wireless microphones. The Commission plans on further rulemakings (<http://www.fcc.gov/document/fact-sheet-upcoming-proceedings-related-incentive-auction>) on wireless microphones, unlicensed TV broadband devices, LPTV and translators and interference issues between wireless and TV.

On June 25th, Chairman Wheeler blogged (<http://www.fcc.gov/blog/incentive-auction-helping-broadcasters-make-informed-decisions-0>) about updates concerning the incentive auction. He provided links to a timetable ([http://wireless.fcc.gov/incentiveauctions/learn-program/Incentive\\_Auction\\_Timeline.pdf](http://wireless.fcc.gov/incentiveauctions/learn-program/Incentive_Auction_Timeline.pdf)) for the incentive auction including when they would be issuing various notices and when the auction may occur. He also announced a series of webinars for June 25, 26 and 27, which included a PowerPoint presentation that explained the auction process ([http://wireless.fcc.gov/incentiveauctions/learnprogram/Broadcast\\_Incentive\\_Auction\\_101\\_slides.pdf](http://wireless.fcc.gov/incentiveauctions/learnprogram/Broadcast_Incentive_Auction_101_slides.pdf)). The webinars

are not currently posted on the FCC website.

In other incentive auction notices, the FCC issued a request for comment on June 20th on interference between TV and LTE operations ([http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0623/DA-14-852A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0623/DA-14-852A1.pdf)) which are due on July 11th. The FCC also issued a number of spreadsheets ([http://data.fcc.gov/download/incentive-auctions/Simulation\\_Results/](http://data.fcc.gov/download/incentive-auctions/Simulation_Results/)) with various scenarios for the repacking of the TV bands in response from a request from the NAB. There will be more in next month's newsletter about the data from the spreadsheets. The FCC will be taking reply comments on the results of their various scenarios through July 22nd. The notice ([http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0602/DA-14-677A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0602/DA-14-677A1.pdf)) announcing the release of the data was released on June 2nd with comments having closed on July 2nd.

There is so much covered in the 484 pages of the report and order including a lengthy discussion on the conduct of the auction that it is impossible to discuss all the issues in this article, but if you are concerned about the incentive auction and its impact, read it yourself. The issues are broken down by subject and then by skipping the footnotes, there is only 2 or 3 paragraphs per page. A somewhat condensed version will be published in the Federal Register in the future. Also the PowerPoint from the webinar offers an easy primer to provide an understandable overview of the auction process.



8001 TERRACE AVE. | MIDDLETON, WI 53562  
p: 608.831.7330 | f: 608.831.6330  
order line: 800.356.5844  
fullcompass.com

**KEVIN PECKHAM**  
Product Manager  
Ext. 1356  
peckham@fullcompass.com

PRO AUDIO VIDEO A/V LIGHTING



**615 Forward Drive  
Madison, WI 53711  
608-274-1515  
www.nbc15.com**



**John C. Purvey**  
BAV Specialist  
Broadcast & AV Solutions  
john.purvey@belden.com  
PHONE: 815.441.5298

447 Hampshire Lane  
Crystal Lake, IL 60014  
www.belden.com

**SCHARCH LLC**  
AVaya \* Lucent Technologies \* AT&T  
Business Communications Service since 1983

1105 Middleton St., Madison, WI 53717  
Tel: 608 831-2266 or 800 831-2266  
www.scharch.net

Stan Scharch  
stan@scharch.net



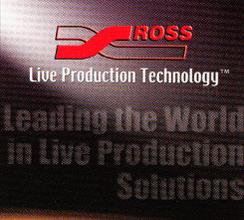
5201 Femrite Drive  
Madison, WI 53718  
p 608.221.8888 f 608.221.9252  
w avisystems.com

**Tom Sibenaller**  
Systems Sales Specialist  
CTS, CSTE  
e tom.sibenaller@avisystems.com  
d 608.807.1860 c 608.386.2611



**Bryan Nelson, CTS**  
Integrated Systems Sales

7711 Computer Avenue / Edina, MN 55435-5494  
direct: 952.841.3304 / cell: 612.819.7213 / phone: 952.896.9898 / fax: 952.896.9899  
bryan@alphavideo.com / www.alphavideo.com



**Brian Stumpf**  
Regional Sales Manager -  
Midwest USA

1266 Gils Way  
Cross Plains, WI USA  
53528-8837  
Tel: (608)798-9578  
Cell: (608)345-2544  
Fax: (608)798-9577  
bstumpf@rossvideo.com  
www.rossvideo.com



**Yohay Hahamy** Ext. 342  
Senior Vice President/Owner

6633 W. Howard St.  
Niles, Illinois 60714-3305

Phone: 847-588-3800  
800-323-5925  
Fax: 847-588-3300  
800-446-8366  
Cell: 847-501-1584

www.josephelectronics.com E-mail yohay@aol.com



**Gepco International, Inc.**  
500 Thorndale Avenue, Suite F  
Wood Dale, IL 60191-1267  
Tel: 1-630-496-0486  
www.Gepco.com

**Matt Hayes**  
Inside Sales  
mhayes@generalcable.com



## **BROADCASTERS CLINIC**

**October 21<sup>st</sup> thru 23<sup>rd</sup> , 2014**  
**Madison Marriott West, Middleton**

### **AGENDA**

#### **Tuesday October 21**

**9:00 AM: FM Filters Plus (The Second Edition), Shivley**

**9:45 AM: Transmission Challenges/Solutions for All Digital AM IBOC, Nautel**

**10:45 AM: Dense Node Architecture for IP Audio Networks, Logitek**

**11:30 AM: Rapidly and Cost Effectively Expand Your Remote Capability, Tieline**

**1:15 PM: New AM Detuning Requirements, Jeremy Ruck & Associates**

**2:00 PM: From Cow Pie to Contour, Morgan Murphy Media**

**3:00 PM: Emergency Alert System Text Messaging by Radio, WPR**

**3:45 PM: NextRadio, Emmis Communications**

**4:30 PM: Equipment Exhibits Open**

**7:00 PM: Nuts N Bolts**

#### **Wednesday October 22**

**8:30 AM: Evaluating Pipe Leg Structures/Controlled Demolition, ERI**

**9:15 AM: Audio Over IP: An Undiscovered Country, Wheatstone**

**10:00 AM: Equipment Exhibits Open**

**1:30 PM: NAB Regulatory Update, NAB**

**2:15 PM: Broadcast Propagation (Coverage and Interference Issues), V-Soft**

**3:15 PM: Bridging the Gap Between the All IP Studio and Transmitter Site, Double Radius**

**4:00 PM: Green Broadcasting (Saving Money and the Environment), Nautel**

**4:45 PM: High Speed Internet and Video Entertainment on the Same Network, IP Action Partners**

**6:00 PM: All Chapter SBE Meeting, The SBE 50th Anniversary, A Look Back**

#### **Thursday October 23**

**8:30 AM: The Evolution of Cellular Bonding, LiveU**

**9:15 AM: Closed Caption Verification in a File Based Workflow, Telestream**

**10:15 AM: Getting the Best from Your Inductive Output Tubes in DTV, e2V**

**11:00 AM: ATSC 3.0 (What Is It and When Will We Have It?), GatesAir**

**1:00 PM: Closed Captioning for the Web, WPT**

**1:45 PM: Loudness vs Speech Normalization in Broadcast, TC Electronics**

**2:30 PM: Repacking (Preparing of Antennas, Combiners, and Transmission Line), Dielectric**

## NAB & SBE team for Satellite Uplink Operator Training Course

The NAB/SBE Satellite Uplink Operators Training Workshop will be held September 29 - October 2, 2014, at NAB's headquarters in Washington, D.C. The Workshop begins each day at 8 a.m. and ends at 5 p.m. Members of SBE may register at the NAB member price.

Satellite interference costs your station time and money. If you or your operations staff have not received formal training for operating your uplink facilities, this is a great opportunity to do so from an expert, Sidney Skjei.

The fee includes classroom instruction, hands-on training in a satellite newsgathering (SNG) truck, a field trip to a nearby large satellite teleport and operations center, lunch and refreshments each day.

The Workshop fee is \$1,250 for NAB and SBE members and \$1,550 for all others. More information about the workshop is available at the workshop page of the NAB website.

August 2014 Chapter 24 Newsletter Deadline:  
 Sunday, August 3  
 paul.stoffel@wpt.org  
*edited using Adobe InDesign CC*

© 2014 by SBE Chapter 24, Inc. Views expressed herein do not necessarily reflect the official positions of the Society, its officers, or its members. SBE Chapter 24, Inc. regrets, but is not liable for, any omissions or errors. The Chapter 24 Newsletter is published twelve times per year. Other SBE Chapters are permitted to use excerpts if attributed to the original author, sources, and SBE Chapter 24.

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

Exam Dates	Location	Application Deadline
August 8-18, 2014	Local Chapters	<b>CLOSED</b>
September 11, 2014	NAB Radio Show Indianapolis, IN	August 22, 2014
October 12, 2014	AES Convention Los Angeles, CA	September 19, 2014
November 7-17, 2014	Local Chapters	October 6, 2014

When you are ready to take an SBE exam, please fill out the appropriate application and send it into the SBE National office (see address below). You will be notified once your application has been approved. Approximately 3 weeks before the exam time, your local certification chairman will receive a list of applicants in his/her area. He/she will then contact those applicants to schedule a date, time and place for the exams. The exams will be mailed back to the National office for grading. The pass/fail grades will then be mailed directly to the applicants. You may mail, email or fax your applications to:

Megan E. Clappe  
 Certification Director  
 9102 N. Meridian St. Suite 150  
 Indianapolis, IN 46260  
 (317) 846-9120 Fax  
 mclappe@sbe.org



## CHAPTER 24 SUSTAINING MEMBERS

### Recent Renewal:

Belden, Inc.

### Thanks to all our Sustaining Members:

- Alpha Video
- AVI Systems
- Clark Wire and Cable
- Full Compass Systems
- GEPSCO International, Inc.
- Heartland Video Systems
- Ikegami Electronics (USA), Inc
- Joseph Electronics
- Resonant Results, Ltd.
- Ross Video
- Scharch Electronics
- Sound Devices, LLC
- Token Creek Productions
- WISC-TV 3
- WMTV-TV 15
- WKOW-TV 27
- WMSN-TV 47