



December 2010

# Society of Broadcast Engineers Chapter 24 Newsletter Madison, Wisconsin

## Next Meeting

Thursday, December 16



### SBE HOLIDAY CELEBRATION DINNER

Join us for this month's meeting when we celebrate the Holidays and toast the New Year in a relaxing atmosphere at Fitzgerald's in Middleton.

We'll gather in the bar area before heading to the dining area.

You can sign-up for the dinner on the Chapter 24 web site, <http://www.sbe24.org> and follow the links to the December Holiday Party sign-up sheet.

Happy Hour 6PM – 7:00 PM

Dutch Treat Dinner at 7:00PM

Fitzgerald's  
3112 Parmenter Street  
Middleton, WI

Visitors and Guests are welcome.



## Coming Up



2011 Meeting Schedule  
Under Construction

## FCC STARTS TV BAND REALLOCATION

>>> by Tom Smith

At the November 30<sup>th</sup> meeting of the FCC Commissioners, the first proposed rulemaking ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1130/FCC-10-196A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1130/FCC-10-196A1.pdf)) was adopted to reallocate part of the spectrum assigned for use of television broadcasting for wireless broadband use. The FCC is proposing to auction this spectrum to wireless carriers for broadband use. The spectrum could then be used for phone and data transmission to smart phones, such as the I-Phone and the Android. This proposal is part of the Broadband Plan, issued a year ago. In the Broadband Plan, the FCC said that there were forthcoming shortages of spectrum for use by the wireless industry due to the demand for Internet access and services such as audio and video streaming. This was again pointed out in the Notice of Proposed Rulemaking.

The Notice discussed how the TV bands are currently used by full-power TV stations, Class A, low-power and translator stations, licensed and unlicensed wireless microphones, the sharing of the spectrum with land mobile on channels 14-20 in certain areas and recently, the white space devices. They also mentioned the June, 2010 paper titled "Spectrum Analysis: Options for Broadcast Spectrum" which discusses using the spectrum for broadband while maintaining the benefits of over-the-air television, including the incentive auctions to facilitate stations giving up their spectrum for broadband use. The June 25, 2010 Broadcast Engineering Forum was also discussed

Reallocation >>> continued on page 5

## From the Chair...

>>> by Fred Sperry

It is hard to believe that the holiday season is already upon us which of course means everyone gets extra busy. I hope you will be able to find the time to join the Chapter for the annual Holiday Party on Thursday December 16 at Fitzgerald's in Middleton. More information on the event can be found in this newsletter and on the Chapter 24 web page ([sbe24.org](http://sbe24.org)) along with a link to sign-up for the event. Thanks to Steve Paugh for coordinating this event as well as all our SBE programs throughout the year!

As has been mentioned previously, I'm in the process of working with the other officers and committee officers to fine tune a handful of updates to our chapter's by-laws. I expect to have the proposed changes posted in the January newsletter. Please make a point of reviewing these proposed by-law changes prior to the January meeting where we will vote on these amendments to the Chapter 24 by-laws.

I wish everyone a great and safe upcoming holiday season. I hope to see you at the Holiday Party on the 16<sup>th</sup>!



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## Chapter Contacts

### Chapter Leadership

#### *Chair*

Fred Sperry, ECB-OC  
W: 608-264-9806  
fred.sperry@ecb.org

#### *Vice Chair*

Bill Hamilton, Wisconsin Eye  
W: 608-316-6850 Ext. 305  
Bill.Hamilton@wiseye.org

#### *Secretary*

Mike Norton, WPT  
W: 608-264-9807  
mnorton@ecb.state.wi.us

#### *Treasurer*

Kevin Trueblood  
Wisconsin Public Radio  
kevin.trueblood@wpr.org

#### *Past Chair*

Dennis Baldrige  
W: 608-489-3999  
baldrige@mwt.net

### Committee Appointees

#### *Program Committee*

Steve Paugh 277-5139  
*volunteers needed for  
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  
608-263-2174  
smithtc@wpt.org

#### *National SBE Chapter Liaison*

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



# Meeting Minutes

from the November 2010 Business Meeting

On Wednesday, November 17, 2010, Chapter 24 of the Society of Broadcast Engineers held their monthly meeting at the Wisconsin Public Broadcasting Center in Madison, Wisconsin. There were 14 members present, 13 who were certified, and 2 guests.

The meeting was called to order at 7:07pm by Chairman Fred Sperry, who started with a quick round of introductions. The meeting minutes from September, as published in the October Newsletter, were approved with no changes on a motion by Tom Smith and a second by Bill Hamilton. There was no formal meeting during October, so there were no minutes to review. Reporting on behalf of Treasurer Kevin Trueblood, Fred Sperry reported the chapter continues to maintain a positive bank balance.

As Sustaining Membership Chair, Fred Sperry noted that the chapter currently has 21 sustaining members. Among those companies, Clark Wire and Cable, WMSN, Belden, and Heartland Video Systems have recently renewed their support.

Program Committee Chair Steve Paugh announced that the next gathering will be the annual Holiday Party on Thursday, December 16 at Fitzgeralds in Middleton. Planning for the next year of programs is beginning; contact Steve if you have suggestions for topics.

Certification and Education Chair Jim Hermanson said he recently proctored a CBNT exam. He then reminded everyone that the next exam session will be February 4-14, 2011, with an application deadline on December 31<sup>st</sup>. The next opportunity will be during the NAB conference in April.

Chapter Frequency Coordinator Tom Smith reported that he received no requests for the November elections, but had for the UW Badgers vs Ohio State football game. He also indicated that stations should license any 2GHz receive sites to protect against wireless operator interference on adjacent frequencies. The NTIA had identified frequency blocks between 400MHz and 4.4GHz for possible broadband use. Tom noted that on November 30<sup>th</sup>, the FCC was scheduled to meet regarding a notice of proposed rulemaking related to television spectrum.

National Liaison Leonard Charles relayed that SBE President John Poray thanked the Wisconsin SBE chapters for their participation in the recent Broadcasters Clinic. He also mentioned that the FCC will be holding meetings on the impact of towers on migratory birds, and that there will be a link with more information on the SBE National website. Chair Fred Sperry then extended his compliments to those involved in another successful Broadcasters Clinic.

For old business, Fred Sperry announced that the Chapter 24 Bylaws updates are still in progress, and that proposed changes will be available for review prior to any vote. Many of the changes are updating the language and clarifying details of some recent chapter initiatives.

In new business, Leonard Charles had a plaque which had been presented to Don Borchert, showing the letter which founded SBE Chapter 24. Don's widow, Mary, stated that Don wanted the Chapter to have the item.

As a professional announcement, Fred Sperry handed around a letter from Barry Mishkind announcing his new venture, the Broadcasters' Desktop Resource at [www.thebdr.net](http://www.thebdr.net). Also, Tom Weeden announced that on October 16<sup>th</sup> WMTV began airing their local newscast in high definition.

There were no tech tips or other announcements, and the meeting was adjourned at 7:23pm. Steve Paugh turned the program over to Tom Sibenaller from Roscor, who introduced Rich Hadju of Utah Scientific. A presentation on HD master control equipment followed.

*submitted by Mike Norton, Secretary*



# Local Legals

compiled by Tom Smith

## PROPOSED

**WPDR (AM) 1350 kHz; WDDC (FM) 100.1 MHz, Portage, WI.**

Zoe Communications, Inc has applied to sell WPDR (AM) and WDDC (FM) to Magnum Communications, Inc for \$750,000. WPDR (AM) operates at 1000 watts daytime and 47 watts nighttime with a non-directional antenna. WDDC (FM) operates with 3 kilowatts at 300 feet above average terrain. Zoe Communications Inc. also owns WSCW (AM) Shell Lake, WGMO (FM) Spooner, WQQQ (AM) Durand, WDMO (FM) Baldwin, and WPLT (FM) Saron. All the stations are in Northwestern Wisconsin. Magnum Communications, Inc. owns WBKY (FM) Portage, WDLA (AM) and WNNO (FM) Wisconsin Dells and WBDL (FM), WNFN (FM) and WRDB (AM) all in Reedsburg. Commonly-owned Magnum Broadcasting, Inc owns WAUN (FM) in Kewaunee and Magnum Radio, Inc owns WBOG (AM), WTMB (FM), WXTM (FM) and WIBU-LP television in Tomah and TV stations KQEG-CA in LaCrescent, MN and WROE-LP in Elk Mound, WI. Magnum has construction permit to move WBKY to Stoughton, WI. The applications were accepted on November 24<sup>th</sup> and announced in the FCC's Daily Digest on November 29<sup>th</sup>.

**WZEE (FM) 104.1 MHz, Madison, WI.**

Capstar TX. LLC has applied for a construction permit for an auxiliary antenna for WZEE (FM). The auxiliary antenna will be a single bay antenna mounted 273 meters above average terrain and 245 meters above ground and radiate 5 KW effective radiated power. WZEE's main antenna is 306 meters above average terrain and 277 meters above ground and has an effective radiated power of 12 KW. The application was accepted on November 24<sup>th</sup> and announced in the FCC's Daily Digest on November 29<sup>th</sup>.

*from FCC website (www.fcc.gov)*

# FCC SEEKS TO PROMOTE INNOVATION

>>> by Tom Smith

The FCC adopted a Notice of Proposed Rulemaking and a Notice of Inquiry on November 30<sup>th</sup> in which they are seeking information on methods to promote innovation in the use of spectrum. The Notice of Rulemaking ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1130/FCC-10-197A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1130/FCC-10-197A1.pdf)) concerns the granting of experimental licenses. These are licenses that are granted to developers of electronic devices that either use spectrum or could cause interference to spectrum users. They are proposing three new experimental licenses: a Research License to be granted to universities, laboratories, and other qualified research institutions; an Innovation Zone License to be granted to allow testing in a discrete geographic area, that is generally remote; and a Medical License to allow medical institutions to innovate and develop devices to save lives. The FCC is also seeking to streamline and clarify existing experimental rules. The proposed and updated rules run 35 pages out of the 88 pages in the Notice of Proposed Rulemaking. This is besides the normal discussion and legal matters that are part of a rulemaking.

The second part of this action is a Notice of Inquiry ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1130/FCC-10-198A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1130/FCC-10-198A1.pdf)) that deals with what the FCC calls Dynamic Spectrum Access Radio and Techniques. In the inquiry the FCC is asking for information about the development of smart radio systems the would do spectrum sensing to find an open frequency, have methods to suppress interference, have radios that follow a set policy or rules for operation in environments and use propagation models for transmitter power control. The FCC is also seeking information on how to manage the use of these smart radios such as the certification and authorization of the units, compliance and enforcement of the rules and dealing with interference issues. Information on flexible use licenses, bands that can be used and the use of a

database are some of the other questions asked along with many more subjects that would affect the use of spectrum and these radios.

The comment period for the rulemaking on experimental licenses is 30 days with a 30-day reply period. For the inquiry on dynamic spectrum access or smart radios, the comment period is 60 days with a 30-day reply period. Both comment periods start with the publication of the Notices in the Federal Register, <http://www.gpoaccess.gov/fr/index.html>

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**Brian Stumpf**  
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 Web Page: [www.tokencreek.com](http://www.tokencreek.com) E-Mail: [john@tokencreek.com](mailto:john@tokencreek.com)



# Amateur Radio News

compiled by Tom Weeden, WJ9H

• On November 30, the American Radio Relay League filed an ex parte submission with the FCC, providing additional support for its position that the FCC should require mandatory notching of the amateur bands by Broadband over Power Line (BPL). The ARRL's filing stated such devices can cause harmful interference to Amateur Radio operators, and requested that the FCC "establish rules that are appropriate for unlicensed BPL systems and which minimize the interference potential."

"It has been painfully apparent that the present rules permit the deployment of BPL in configurations which cause severe, ongoing harmful interference if operated on radio spectrum that is in use locally," the ARRL asserted in its filing. The ARRL, in its numerous filings on this issue has "strenuously urged" the FCC to require full time, mandatory notching of all amateur allocations to at least 35 dB notch depths. "This level of notching is both achievable by present BPL systems and is typically, but not universally, implemented by the BPL industry."

The ARRL says that even though there are tens of millions of broadband lines available in the US, BPL has only captured 0.011 percent of that market; each time the FCC releases an updated broadband report, the numbers get even smaller.

• The 12th Annual SKYWARN Recognition Day (SRD) Special Event took place Saturday, December 4. SRD is co-sponsored by the ARRL and the National Weather Service (NWS) as a way to recognize the commitment made by Amateur Radio operators in helping to keep their communities safe. According to SRD Coordinator David Floyd, N5DBZ, Amateur Radio operators were able to visit their local participating NWS office, working as a team to contact other hams across the world throughout the 24 hour event.

The idea for the first SRD took shape in the summer of 1999. Meteorologist-in-Charge of the Goodland, Kansas NWS office Scott Mentzer, N0QE, tried to find a way to recognize the valuable contributions storm spotters make to the National Weather Service. "Since many of those storm spotters were also hams," Floyd told the ARRL, "it seemed like a natural fit for the recognition to be centered on Amateur Radio."

With the approval of NWS headquarters and a commitment to participate from many local NWS offices across the country, the first National Weather Service Special Event took place on November 27, 1999. "At the end of the event, almost 16,000 contacts were logged, with contacts made to all 50 states and 63 countries," Floyd recounted.

Station call signs have changed over the years. Floyd said that some NWS offices and clubs apply for a special event call sign, "such as W3B in Brownsville or N0Y in Aberdeen, South Dakota. Other call signs hint at office location, including WX9GRB in Green Bay and WX4NHC at the National Hurricane Center. Still others represent more of the big picture, as in KC0SKY in Pleasant Hill, Missouri."

Floyd said that as SKYWARN Recognition Day has grown throughout the years, he has seen a greater use of digital communications in addition to Morse Code, radioteletype and packet radio: "Each year, more and more contacts are being made using EchoLink, Winlink and the use of e-mail reflectors." In keeping with the NWS setting, stations are asked to include a weather report of their location in their exchange.

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



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## Reallocation

>>> continued from page 1

and they said the information from that meeting was used in developing the proposals in this notice. At the meeting cellular and distributive transmission systems, repacking of channels, channel sharing and VHF reception were discussed. The Commission noted that they were developing an Allotment Optimization Model to allow the user to optimize broadcast channel assignments. They did not say which user, the broadband provider or the broadcaster. Discussion of the Optimization Model was the only comment pertaining to spectrum efficiency and allocation of TV channels. The Notice did point out that broadcasters did transmit a 19.4 mbps data stream over a 6-megahertz bandwidth even when they were transmitting information that required less data, which prevents some of the spectrum from being used for a return signal path.

The Notice only dealt with three proposed subjects for rulemaking. The first subject was reallocation of the band for broadband. In what most broadcasters would consider the most important, the FCC spent two paragraphs on reallocation. The Commission is proposing that broadband users would be able to share the entire TV spectrum including the VHF bands on a co-primary use with broadcasters. The new users would have the same rights as full service broadcasters including interference protections. The proposal would also extend the existing land mobile allocation in the areas where they operate in the 470-512 MHz portions of the UHF TV band to include the new broadband allocations. There was no information on how these systems would be allotted spectrum, such as by channel, area, interference protections or if they would be low-power cellular-type systems or a mix of low-power or high-power systems as is allowed in the 700 MHz band.

The second subject was channel sharing in which two or more stations would transmit their programs on one 6 MHz channel by sharing the same 19.4 mbps data stream. The discussion of that proposal covered 6 and half pages of the 46-page notice. They would require each station to operate at least

one channel in SD and it would be up to the participating stations to work out the use of HD transmission or multicast or mobile channels. The stations would still retain their full must carry rights and each would be individually responsible for meeting their FCC obligations pertaining to children's programming, political broadcasting, EAS, indecency, public files and other FCC requirements and would not be subject to violations by the other party. Low-power stations could also share with each other or with a full-power station.

The third subject in the rulemaking is VHF improvement. The FCC has proposed allowing low-band VHF stations to increase their power to 40 kW and high-band VHF stations to increase their power to 120 KW in Zone 1, which covers the Northeast portion of the nation. This is a 6 dB increase of power and would increase the service range of the stations by up to 9 miles and would require stations to negotiate interference agreements before increasing power. The second part of the VHF improvement proposal is requiring under the All-channel TV act that all indoor antennas meet the ANSI/CEA-2032-A Indoor TV Receiving Antenna Performance Standard. The section on VHF improvement also ran 6 and half pages.

In their written comments concerning the proposed rules, Chairman Julius Genachowski stated how this would help in wireless broadband development while Commissioners Michael Copps and Robert McDowell express some misgivings about the proposal with Copps saying that although he has some concerns about how broadcasters are serving the public, TV broadcasting still has the potential to serve the public. McDowell echoed Copps comments about the benefits broadcasters can deliver and noted the problems with the DTV transition and noted that the ramifications of the decision to move stations back to the VHF channels needed to be fully understood. Commissioner Mignon Clyburn expressed concern about the impact this action could have on TV viewers, particularly the senior citizens and the poor. Commissioner Meredith Attwell Baker said that while she supported adding the allocations of wireless services to the TV band, she noted that many issues were not

addressed and that there were mistakes made in the past, such as the wireless microphone issues; the issue of high-power TV on channel 51 operating next to wireless systems; and how to deal with TV public interest obligations if TV stations are given the ability to provide other types of services. She suggested that the possibility of using MPEG-4 encoding, changing from ATSC to OFDM modulation, cellular transmission systems and other technologies should also be discussed.

Comments will be due 45 days after publication in the Federal Register and replies due 30 days later.



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David Pavlik  
Midwest Regional Sales Manager  
Broadcast Division

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

## FCC AMENDS SATELLITE BROADCAST TV CARRIAGE RULES

>>> *by Tom Smith*

The FCC adopted a number of rulemakings concerning the carriage of broadcast stations by direct satellite video providers, which mainly would be DirecTV and Dish Network. The rulemakings include carriage of out of market stations, signal prediction, signal measurement and a Notice of Inquiry concerning carriage of in-state stations.

The rulemaking on carriage of out of market stations ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1123/FCC-10-193A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1123/FCC-10-193A1.pdf)) extends carriage to an area of stations that are not in the local-into-local package of a satellite subscriber but may be viewed over-the air or on the local cable system. If a station reaches a certain viewing threshold in a market, the satellite provider may deliver that signal to the subscribers in that area. This would affect areas where two stations of the same network overlap; but one has greater viewership. Normally, in those overlap areas, stations from one market tend to dominate over stations from the other market, so the market goes to them and the stations from the second market are not delivered to that area. Cable has been able to carry stations from both markets since the 1972. Previously satellite providers were only able to deliver out of market signals when there was no network affiliate in that area or when the viewer was outside of a designated market. The rules will still allow for that carriage. Besides meeting certain viewership requirements, the out-of-market station cannot be in HD unless the local station is in HD and the subscriber must take the primary local-into-local package.

The second rulemaking concerns signal prediction ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1123/FCC-10-194A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1123/FCC-10-194A1.pdf)) to test if a satellite subscriber is within a stations coverage area. In this ruling, the FCC adopted a new Individual Location Longley-Rice Model for digital television and retained the 50-90 coverage curves. This curve is used to predict signal level at a point away from the transmitter. The

50-90 curves predict that 50 percent of the viewers in an area will have a good signal 90 percent of the time. The rules also state that coverage must be figured on the use of an outside antenna that is 20 feet high for the owner of a one story home and 30 feet high for the owner of a two story home. Dish Network and DirecTV wanted reception with an indoor antenna as the reference.

The third ruling is on the methods for conducting a field test ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1123/FCC-10-195A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1123/FCC-10-195A1.pdf)) when there is a question if the viewer can actually receive a stations signal. The ruling requires that the person doing a field strength test must place the test antenna at the height prescribed for the height of the home; that the measurements be taken at five locations around the house; that the same locations be used for all the stations tested; that the test cannot be done in bad weather; and that the time, channels and description of the equipment be included in the report. Either a di-pole, or an antenna with gain, can be used to do the test. The antenna should be part of the field strength meter package.

The last part of this action is a Notice of Inquiry into carriage of in-state stations. ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1123/DA-10-2227A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1123/DA-10-2227A1.pdf)) The FCC is concerned that some viewers are deprived of local and state news because they are in a market that is served by out-of-state stations. This situation occurs in Northwestern Wisconsin along the Minnesota border. The counties along the Wisconsin, Minnesota border near the Twin Cities are in Twin Cities market and would receive no Wisconsin TV stations in their local-into-local service from a satellite provider. The FCC wants to know how widespread the problem is and if they should changes the rules to allow for carriage of in-state and in-market stations.

The out-of-market carriage rules were published in the November 29<sup>th</sup> issue of the Federal Register and take effect on December 29<sup>th</sup>. The comment period for the in-state carriage inquiry ends 45 days after publication in the Federal Register with the reply comments due 75 days after publication.

## NTIA IDENTIFIES SPECTRUM FOR BROADBAND.

>>> *by Tom Smith*

On November 15<sup>th</sup>, the National Telecommunications Information Agency (NTIA) issued three papers identifying 2,263.9 MHz of possible spectrum between 406.1-4400 MHz. Some of the spectrum has already been identified in the FCC's Broadband Plan and the FCC has already taken some steps to allot some of the spectrum for broadband use. Much of the rest of the spectrum is either allotted to the Federal Government or shared between government and non-government use. Included in the spectrum that the NTIA has identified is the 120 MHz the FCC is seeking from the TV broadcast band.

The three papers include a 5-page Fact Sheet ([http://www.ntia.doc.gov/reports/2010/SpectrumFactSheet\\_11152010.pdf](http://www.ntia.doc.gov/reports/2010/SpectrumFactSheet_11152010.pdf)); the 34-page document entitled Ten Year Plan and Timetable to Make Available 500 MHz of Spectrum for Wireless Broad Plan ([http://www.ntia.doc.gov/reports/2010/TenYearPlan\\_11152010.pdf](http://www.ntia.doc.gov/reports/2010/TenYearPlan_11152010.pdf)), which outlines and explains the plan and timetable for finding and re-allotting the 500 MHz of spectrum. The published timetable covers the next 5 years. The third document is a 262-page Report on the Assessment of the Near-Term Viability of Accommodating Wireless Broadband Systems in the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 and 4200-4220 MHz and 4380-4400MHz bands ([http://www.ntia.doc.gov/reports/2010/FastTrackEvaluation\\_11152010.pdf](http://www.ntia.doc.gov/reports/2010/FastTrackEvaluation_11152010.pdf)). These are bands of spectrum that the NTIA wishes to fastrack for broadband use.

All of these bands are mainly

*Spectrum* >>> continued on page 7

**Spectrum** >>> continued from page 6

allotted for some type of Federal use with most of the bands having safety and defense use. Meteorological satellites and radiosondes use the 1675-1710 MHz band. The Department of Defense uses the 1755-1780 MHz band for satellite use. The Navy uses the 3500-3650 MHz for shipboard radar, but the band is allotted for WiMax use in many parts of the world. The 4200-4220 MHz and the 4380-4400 MHz bands are the upper and lower edges of the 4200-4400 MHz band used for radio altimeters. The use of the 1675-1710 MHz, 4200-4220 MHz and 4380-4400 MHz bands has some major issues concerning public safety and would take some time to reallocate. The NTIA thinks that the 1755-1780 MHz band could be used in parts of the country that is out of line-of-sight from the Defense Departments uplink/downlink sites. The 3500-3650 MHz band could be used in most of the country away from the nation's seacoasts. The NTIA had a number of maps showing the areas that would be available for broadband use for both of the bands. If those areas were a certain minimum distance away from NOAA satellite uplink/downlink sites, and the 87 sites that NOAA uses radiosondes, then those areas' frequencies could be used for broadband use. The 262-page document has detailed descriptions of how the various bands are used and extensive interference calculations as well as maps on where the various government facilities are located with their interference zones.

The complete list of spectrum that may be available is shown on a spreadsheet that was taken the Fact Sheet and the Ten Year Plan and Timetable to Make Available 500 MHz of Spectrum for Wireless Broadband Plan. The spreadsheet is shown upper right.

Besides the TV broadcast

### Initial Band Candidates that NTIA and the National Broadband Plan Identified

Frequency Band (MHz)	Amount (Megahertz)	Current Allocation/Usage (Federal, Non-Federal, Shared)
(Broadcast TV)** VHF/UHF Frequencies	120	Non-Federal
406.1-420	13.9	Federal
(D-Block)** 758-763 788-793	10	Non-Federal
1300-1390	90	Federal
(MSS)** 1525-1559 1626.5-1660.5	40	Non-Federal
(MSS)** 1610-1626.5 2483.5-2500	10	Non-Federal
1675-1710*	35	Federal/non-Federal Shared
1755-1780*	25	Federal
1780-1850	70	Federal
(AWS 2/3)** 1915-1920 1995-2000	10	Non-Federal
(MSS)** 2000-2020 2180-2200	40	Non-Federal
(AWS 2/3)** 2020-2025	5	Non-Federal
(AWS 2/3)** 2155-2180	25	Non-Federal
2200-2290***	90	Federal
(WCS)** 2305-2320 2345-2360	30	Non-Federal
2700-2900	200	Federal
2900-3100	200	Federal/non-Federal Shared
3100-3500	400	Federal/non-Federal Shared
3500-3650*	150	Federal
3700-4200	500	Non-Federal
4200-4400	200	Federal/non-Federal Shared
[4200-4220 & 4380-4400]*		Federal/non-Federal Shared
<b>Total</b>	<b>2263.9</b>	

\* Bands selected for Fast-Track evaluation

\*\* Identified in the National Broadband Plan, Recommendation 5.8, page 86 (using nomenclature contained in Exhibit 5-E)

\*\*\* NTIA notes the ITU-R SA.1154 Recommendation

band, the FCC has already started rulemakings to reallocate the MSS, AWS and WCS bands for broadband. One other band that is not yet covered under a rulemaking to be allotted for broadband is the 3700-4200 MHz C-band satellite bands, which broadcasters and others use to obtain programming and other types of communications.

How much and how soon can any of this spectrum be converted to broadband use is still unknown. Current users may have to be moved

to other bands, that are usually less desirable, and that takes time. Moving some of the users of these bands can cause public safety concerns and disruptions to those services. And there is the question of will this entire spectrum be needed for broadband use and are there better ways of managing the current spectrum that is allotted or being allotted for broadband use. The process in making these changes will take time and may not happen as fast as some wish.

**FCC DELAYS  
CAP DEADLINE**

>>> *by Tom Smith*

On November 18<sup>th</sup>, the FCC adopted an order ([http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db1123/FCC-10-191A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1123/FCC-10-191A1.pdf)) that extended the deadline for broadcasters and other EAS participants from March 29, 2011 to September 30, 2011. The original deadline was 180 days from when FEMA announced the technical standards and requirements for the Common Alerting Protocol (CAP) Emergency Alert Network EAN system, which was on September 30, 2010. The FCC said that by retaining the original deadline it would “lead to an unduly rushed, expensive and likely incomplete process.” There is a need to factor in a number of issues pertaining to the implementation to the CAP/EAN system.

These issues include the FEMA adoption of CAP; the initiation of the IPAWS network for EAN dissemination;

the addition of the CAP-IPAWS conformance testing of devices and systems to be potentially connected to the IPAWS network by FEMA; and FCC-type certification of CAP/EAS devices mandated for EAS participants. Other issues include the need for participants to obtain IP connectivity to receive CAP/EAN messages; and the time needed for equipment procurement, installation and testing. The FEMA testing of equipment was a late addition to the standards. The FCC plans to issues rules in the near future on CAP reception and FCC testing rules in relation to the FEMA testing.

The order was released on November 23<sup>rd</sup>.



**CHAPTER 24  
SUSTAINING  
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Fax: 847-795-8770  
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Plymouth, WI 53073  
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(920) 893-4204  
Fax (920) 893-3106  
[mbart@hvs-inc.com](mailto:mbart@hvs-inc.com)  
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**Certification Exam Session Dates**

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

EXAM DATES	LOCATION	APPLICATION DEADLINE
February 4-14, 2011	Local Chapters	December 31, 2010
April 12, 2011	NAB Convention	March 25, 2011
June 3-13, 2011	Local Chapters	April 15, 2011
August 5-15, 2011	Local Chapters	June 3, 2011
November 4-14, 2011	Local Chapters	September 16, 2011