Chapter 24, Inc.
Madison, Wisconsin

Society of Broadcast Engineers *October 2004*

ARE YOU READY FOR DHS ALERTS FROM NWR? EAS CODES DEFINED!

By Gary Timm

On June 17, 2004, the U.S. Department of Homeland Security (DHS) signed an agreement with NOAA/NWS addressing the transmission of DHS-originated emergency messages over All-Hazards NOAA Weather Radio (NWR).

If DHS becomes aware of a threat in a particular state or area of the country, after coordination with authorities in each involved state, DHS will issue an alert to all NWS offices via a link in the Washington, DC area. NWS offices with NWR coverage areas affected by the threat will broadcast the message on NWR, using the DHS-requested EAS/SAME Event Code. Currently, the alert will not be relayed in text form on NOAA Weather Wire Service (NWWS), EMWIN, or any other NWS system.

Although many broadcasters have upgraded their EAS Units to the new EAS Event Codes released in 2002, the second step is that the EAS Units must be programmed to react to the new codes. If broadcasters want to relay these DHS alerts, they will need to know the Originator Code and Event Codes to program into their EAS Unit filters. In reviewing NWS documents (NWSI 10-1710 & NWSI 10-518), as well as information provided by Herb White, Dissemination Services Manager at NWS HQ, the following are the recommendations we felt appropriate at this time.

The Originator Code on all DHS alerts will be **CIV**, Civil Authorities. (Even though the alerts are first broadcast on NWR, they are originated by Civil Authorities and thus will not carry the WXR, National Weather Service Originator Code. These non-weather alerts will use the CIV Originator Code.)

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Next Meeting:

Wednesday, October 13, 2004

Broadcast Clinic and Upper Midwest Regional SBE Meeting

Tower Safety

Meeting and Program at 7:00 PM

Marriott – West 1313 John Q. Hammons Drive

In This Issue:

DTV CHANNEL REPACK (And Other R&O Highlights)

By Leonard Charles

The second DTV Biennial Review Report & Order contained a seven step DTV channel repack to determine final channels for digital stations at the conclusion of the transition from analog television service. At the time of this writing the R&O had not yet been published in the Federal Register and so was not yet "official."

Not contained in the R&O were digital television point of sale labeling or a specific end-of-transition date. Those could come in a second Report & Order. Note that Congress continues to work toward establishing an end of transition date as a separate matter.

For full details of each of the following steps please read the actual R&O.

STEP ONE– Pre Election Matters: Estimated October 1, 2004, Licensees must submit corrections to their channel(s) technical information that may be inaccurately portrayed in the FCC database.

Estimated November 2004: Licensees must certify that their database information is correct and that they will actually build the facility reflected in the database. (Sanctions will be imposed on stations who certify to build full or maximized facilities but later don't.)

STEP TWO– First Round: Estimated December 2004, First Round Elections for licensees with at least one in-core channel. Licensees with two in-core channels must choose one. The FCC will give highest priority to those choosing their existing DTV channel. Licensees with only one in-core channel must elect to keep it or turn it in and be treated like a licensee with two out-of-

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September Business Meeting Minutes

Chapter 24 of the Society of Broadcast Engineers met on Thursday, September 16, 2004 at VIP Duplication & Media Services in Madison, Wisconsin for the chapter's monthly meeting. There were 14 members in attendance, 12 of whom were certified and 3 guests.

The meeting was called to order at 7:00 PM by Chapter Chair Vicki Kipp. The minutes of the August meeting as published in the September newsletter were approved. The deadline line for the October newsletter will be Friday, October 1st at midnight and the folding party will be held Wednesday, October 6th at 5:30 PM also at WKOW-TV.

Treasurer Leslie Franzen submitted his reported that the chapter has a balance in the black. Sustaining Membership Chair Fred Sperry reported on three recent renewals: Sony, WMSN, and CTI. The Chapter currently has 22 sustaining members.

Program Chair Steve Paugh reported the next meeting would be Wednesday, October 13th during the Broadcast Clinic and would be presentation by ComTrain LLC on Tower Safety. The following meeting is a Certification Night on Thursday, November 18th and the December meeting is the Chapter's Holiday Party on Wednesday, December 15th.

Certification and Education Chair Jim Hermanson reported the next certification period is November 12-21 with the deadline for applications being September 24th. If you register to take an exam during the November period, you will receive a free copy of the Certification Preview, a new certification study guide. The Preview is normally $27 and is a Windows CD that assists you in studying for any of the exams. Jim also announced that Dennis Baldridge is working on his Professional certification and needs a letter from either a current Senior or Professional certified level SBE members.

Frequency Coordinator Tom Smith reported four prior coordination requests. One was from River Falls for a STL for the University station, another was for Eau Claire, Channel 10 in Milwaukee, and the fourth for Madison which will be a problem for the move of Midwest Family Broadcasting. The last one is still being researched. The database is showing duplicates, which is showing a weakness in the prior coordination process for someone who does not know the area.

National Liaison Leonard Charles reported on the outcome of the National SBE election. Raymond Benedict from Viacom in Washington, D.C. was elected to a second one-year term as President. Christopher Scherer, editor of RADIO magazine in Overland Park, KS and chair of the SBE Certification Committee, was elected to his first term as Vice President. Ralph Hogan from Washington State University and a member of the Certification Committee was elected to his second term as Secretary. Robert Russell of Yuma, AZ was elected to his second term as Treasurer. The six new directors who were voted in are James Bernier (Turner Entertainment, Atlanta, GA), Keith Kintner (UW, Oshkosh), Vincent

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AMATEUR RADIO NEWS

By Tom Weeden, WJ9H

• Amateur radio once again was part of a storm relief and recovery effort in the wake of Hurricane Jeanne–the fourth storm in six weeks to hit Florida. Jeanne made landfall September 25 some 5 miles southeast of Stuart–not far from where Hurricane Frances struck September 5. Authorities blamed the storm–a Category 3 hurricane with 120 MPH winds–for at least six deaths, and the state was declared a major disaster area. The Hurricane Watch Net (HWN) <http://www.hwn.org>, whose members tracked the storm up through the Caribbean, wrapped up three full days of communication support September 26.

During severe storms, the HWN works hand-in-hand with WX4NHC <http://www.wx4nhc.org> at the National Hurricane Center in Miami to gather ground-level weather data and damage reports from Amateur Radio volunteers in a storm's path. The net relays these to forecasters via WX4NHC, which regularly checks into the net and also disseminates weather updates.

Amateur Radio Emergency Service (ARES) volunteers were at the ready before Hurricane Jeanne arrived, supplementing communication at emergency operations centers and shelters set up for evacuees. ARRL Southern Florida Section Emergency Coordinator Jim Goldsberry, KD4GR, said Indian River County appeared to be the hardest hit. ARES teams in Palm Beach, Martin, St Lucie, Brevard, and Indian River counties also assisted American Red Cross and Salvation Army relief and damage assessment efforts.

• FCC to regulate satellite debris: New FCC amateur radio space station rules will require submission of an "orbital debris mitigation plan" to the FCC with each license application. AMSAT-NA—the Radio Amateur Satellite Corporation—had wanted amateur radio exempted from any orbital debris mitigation requirements that went beyond what the FCC initially proposed for Part 97 in 2002. AMSAT-NA President Robin Haighton, VE3FRH, said the organization is discussing the implications of the Report and Order but has no formal position yet.

"While AMSAT does not like to be restricted–we are free enterprise people–we do acknowledge that even space is not limitless," said Haighton. "The more debris there is, particularly in lower orbits, the more danger there is of collisions and eventually the greater the difficulty in defining launch windows."

The AMSAT-NA president said that while he personally agrees with the notion of limiting space debris, "the application of this principle may be a problem."

The new rules the FCC has ordered will significantly expand §97.207(g) in the Amateur Service rules governing space stations. Space station license grantees will have to state, among other things, that they have "assessed and limited the amount of debris released in a planned manner during normal operations" as well as the probability that the space station itself could become a source of debris through collisions with other debris or meteoroids.

AMSAT pointed out that many smaller satellites of the type most likely to be launched for amateur satellite use lack propulsion systems to maintain a certain orbital tolerance or to deorbit the spacecraft when its mission is over. Most, AMSAT told the FCC, would burn up in the atmosphere.

The FCC has not yet announced an effective date for the new Part 97 rules.

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

EAS CODES DEFINED! (continued from page 1)

One of three Event Codes will normally be used. **CEM** (Civil Emergency Message) or **CDW** (Civil Danger Warning) will be used to activate the alerts. **ADR** (Administrative Message) will be used to terminate the alerts. If you want to be on the safe side, Herb White advises you also program the following codes for possible DHS use: **EVI**, **HMW**, **RHW**, **SPW**, **FRW**, **LAE**, and **NUW**. At the present time, NOAA has requested that DHS use only the CEM code, until we can get the word out into the broadcast community to add these other codes into our EAS Unit programming. Broadcasters should program these new codes into their EAS Unit filters as soon as possible, and all stations are encouraged to share this information with other broadcasters in their area.

In addition to the DHS alerts, a separate agreement between NOAA and the FEMA National Warning Center (NWC) exists for NWR to transmit warnings of nuclear attack as well as other non-weather alerts. Nuclear attack would use code CDW, and the other non-weather alerts could use any of the additional codes which Herb recommends adding above. Using the guidelines above regarding programming for DHS alerts should then cover you for NWC alerts as well. The NWC alerts are separate from any EAN messages issued by the White House.

LOCAL ALERTING

NWS is taking the new All-Hazards Radio moniker to heart, and has made changes recently to make NWR more available to local civil authorities. As of June 30, 2004, all the new EAS Event codes were approved for use on NWR. On September 8, 2004, NWS offices began using the new EAS-equivalent Product Codes in text messaging as well (via NWWS, EMWIN, etc.)

NWS has also published a very helpful document, NWS Instruction 10-518, which aids local authorities in establishing a relationship with their local NWS Office for the purpose of sending local emergency alerts. Section 5 of the document, Civil Emergency Message, addresses local alerting. It deals with developing procedures, issuance criteria, and sample scripts. Appendix C of this document is a landmark. Someone has finally defined the new specific EAS Event Codes. The definitions in Appendix C will be used as guidance for federal authorities in issuing alerts, and they can be most useful to local authorities as well. State and Local EAS Plans should be updated at this time to not only include the relay of DHS alerts, but also to incorporate these new EAS Event Code definitions. The link to this document is: http://www.nws.noaa.gov/directives/010/pd01005018c.pdf

Looking to the future, NWS is currently working on a system called HazCollect, which it expects to begin deploying in mid-2005. This would be a secure, centralized interface, with backups, which would be used to collect non-weather hazard messages from local, state, and federal authorities and get them into the NWR system. NWS is really going the extra mile to work with local authorities, and it's great to see.

Gary Timm is a Broadcast Engineer at Journal Broadcast Group, in Milwaukee, and is Broadcast Chair of the Wisconsin EAS Committee. Contact him at: gtimm@journalbroadcastgroup.com. For questions on NWR, contact: Herbert.White@noaa.gov Herb is Dissemination Services Manager at NWS Headquarters in Silver Spring, MD.

EARLY TV SHUTDOWN FOR PUBLIC SAFETY

By Tom Smith

In an appearance on September 8th before the Senate Committee on Commerce, Science, and Transportation, FCC Chairman Michael Powell gave a report on actions the FCC has done that related to the 9-11 Commission's recommendation to provide spectrum for public safety. In the prepared statement, the chairman talked at length about the DTV transition and how it affected the future use of channels 63, 64, 68, and 69 for public safety applications. He discussed the FCC proposed shutdown of analog TV by January 1, 2009, and the proposed shutdown by Congress in the "Hero Act" of all analog and DTV operations on channels 63, 64, 68, and 69 by December 31, 2006 and its impact. He urged Congress to take steps to limit the disruption to the public.

On September 22nd, the Committee approved a proposal that would require the stations to clear those channels by January 1, 2008. There was language in the proposal to allow the FCC to delay the action if it determines that the clearing of the channels would result in consumer disruption. Senator John McCain argued against the consumer disruption section of the proposal and pushed for a strict deadline of December 31, 2006. This action would affect about 75 TV stations and must still go before the full Senate and House.

From FCC Release (www.fcc.gov) with additional information from the Washington Post (www.washingtonpost.com)

CONNECTING WITH THE AUDIENCE

By Tom Smith

In the last two months, we have looked at who is watching our over-the air signal, and at ways to be more competitive with it. But it does very little good to develop a plan to provide new program services if no one knows about them or can receive them. As broadcasters whose job it is to get out other people's messages with the advertising time we sell, and as one of the users of much of the new technology, we have done a poor job of getting others to embrace our technology and the services we provide. To many, we are just another channel on a technology we as broadcasters have very little control of, mainly cable and satellite.

MAKING THE TECHNOLOGICAL CONNECTION

Over-the-air broadcasters in the last twenty years have let others control our access to the homes in our market areas, first by cable and then by satellite. It was an easy way of deal with the problems of viewers that were unable or unwilling to try to improve the quality of their viewing experience. One of the problems with over-the-air broadcasting is that, as a program supplier, the local broadcaster had little control of the transmission system they used. We would send out what we thought was a wonderful signal from our multi-million dollar transmitter and tower to be received by the least expensive TV the viewer could buy — with a pair of rabbit ears that cost a few dollars, or a rooftop antenna that most likely had bent or missing elements and probably wasn't even pointing in the right direction.

All other suppliers of wireless systems have control over a least part of the consumer end of the system. Services like satellite TV and cell phone providers sell the equipment that they want the consumer to use. In most cases, satellite services install that equipment through a dealer. Cellphone providers manage the consumer's equipment by sending control signals that selects the proper frequency and power level to operate on. Other services such as wireless cable and wireless Internet providers install their own equipment for the consumer, while cable provides a signal to the back of the consumers TV.

As other services provided a nearly end to end service, broadcasters had to rely on a consumer electronics industry that has increasingly aligned with our competitors and did little to improve the consumer's television equipment as technology advanced. TV tuners were improved mainly for the ease of channel selection and not for improved reception in poor reception conditions; antenna technology had stood still for nearly twenty years, There was a big push in the late seventies for improvement in UHF reception when a large number of stations in that band went on the air, but then cable came along and the development of new antennas and tuners and the promotion of the UHF band quietly disappeared as those stations took their place on the cable.

Not until DTV started to reach the marketplace was there much interest in reception issues. A good indication of the decrease in interest in over-the-air reception was the fact the writers in electronic hobby magazines and do-it your self magazines such as Popular Mechanics all but ceased to do articles on installing your own TV antenna or on methods of improving reception after the mid 1980's. The first article of any length on broadcast TV reception appeared in Sound and Vision in early 2000. This article was due to the introduction of DTV transmissions. As the introduction of DTV to the public increases, many articles that are being written about DTV mention over-the-air reception issues. Some articles discussing the problems are somewhat negative to over-the-air reception and some give some helpful hints. In the August 29th issue of the Sunday Washington Post (www.washingtonpost.com), there was a long article on DTV issues including over-the-air reception problems and the improvements in receivers. There is also a transcript of an online chat with the author, Rob Pegoraro of the Washington Post and another with Mark Cuban of HDNET on DTV issues. The Washington Post archives articles for several months online with no charge to user's, but they require users to register. Sound and Vision does an article and a number of reviews on HDTV on a regular basis, as are an increasing number of other magazines devoted to video and high end entertainment users.

DEALING WITH RECEPTION ISSUES

The first thing is to ask is: why all the difficulty? Receiving a TV broadcast signal should be very easy, as we transmit with very high power, up to five megawatts in analog UHF TV, from very tall towers or very high terrain. With all this power and height, we can barely be received by an indoor antenna at a location within a few miles of the transmitter, let along with a antenna mounted 40 or 50 feet high 40 or 50 miles away. Yet a cell phone operating at 1.9 GHz that transmits at less than a half watt can be used indoors with fewer problems. The base station for a cellphone system operates at a few hundred watts in most cases. And then there are wireless computer networks and cordless telephones operating at 2.4 GHz that have little problem getting through or around walls or other obstructions. And these frequencies were considered suitable for line of sight only a few years ago.

Part of the issue with TV broadcast signals is that they are wide bandwidth, which makes reception more difficult. The longer wavelengths of VHF also make for difficulties in building penetration. The other is the lack of knowledge about the use of antennas and poor reception by TV sets. TV sets today give a very good picture with a strong signal due to improvements such as comb filtering, including the latest three line comb filters. IC technology has also improved sets by making the operation very stable compared to early transistor sets and all the technology in the last 25 years is better than the early tube sets. But the question has to be asked why things like ghost canceling and the use of digital processing for detection, noise reduction and color decoding was not developed for use in most consumer sets.

One of the problems is that broadcaster have not focused on the

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CONNECTING WITH THE AUDIENCE (continued)

consumer end of the broadcast system as they did in the early days. When TV was just starting out two of the early networks and one of the largest TV groups at the time also made TV sets and broadcast equipment. RCA owned NBC with its owned and operated and affiliated stations. Dumont also ran stations and a network, and General Electric owned a number of stations. They all had a vested interest in getting sets to the consumer so that viewership of their stations and networks would increase. RCA as well as CBS also ran research labs that developed broadcast and consumer equipment. RCA did much of the early development of both broadcast and home TV equipment, and both RCA and CBS developed color TV systems. Unlike the cable industry, broadcasters do not run large research labs either individually or as a group today.

What is happening today to improve reception of the over-the-air signal. TV set makers are working to improve the design of the DTV tuner, which the FCC has ruled is the future of TV. Early problems with DTV reception forced the broadcast and consumer electronics industries once again to focus on reception issues. With the natural high quality of a digital signal, Zenith and others have developed tuners that correct all but the worst reception problems. Antenna manufacturers have finally started to use new technology in their designs. Channel Master (www.channelmaster.com) came out in 2000 with the stealth antenna that is 52" wide and 15' long. The Stealthtenna has heavy stamped flat elements with a central plastic housing the protects the transmission line connection and holds an optional preamp. Wineguard (www.wineguard.com) came out this year with their SS-1000 Square Shooter which is 16" square and 4" thick and is enclosed in a plastic cover to match satellite dishes. Terk (www.terk.com) makes a number of antennas that are in a long plastic tube with a helically wound antenna element like land mobile antennas. Zenith (www.zenith.com) sells the Silver Sensor indoor antenna which was designed by a company in England. The interesting thing about these antennas is that they are not a long boom with a bunch of rods of different length hanging off of it. These antennas are small and designed to look pleasing to the eye even if they are not as sensitive as traditional antennas. The days of the antenna with bent and broken rods on the roof may be ending. These antennas and DTV sets are not perfect, but they are heading us in the direction of making TV reception closer to being easier to install and more foolproof.

But even if the antennas look nice, will people put them up? Just look at the roofs of many homes. There are satellite antennas on many roofs and some homes have antennas from a wireless cable service. How many homes even with satellite dishes have a broadcast antenna on the roof? In Sun Prairie, WI, the local municipal power company runs a wireless Internet service with antennas for the service operating on the city's water towers. Homes that subscribe to the service have a small antenna that is less than a foot square on their roof on masts up to 12 feet. Some of the antennas are a foot off of the roof and one was mounted on the side of a house and matched the siding. Similar services exist in many other cities using the same small antennas.

The experience from satellite and Internet services shows that people will put up antennas if they perceive value for what they receive. This means that broadcasters must provide services that the public considers of value to themselves. Also many viewers will not install a traditional antenna that requires exotic mounting on the roof. An antenna that could mount either on the roof or the side of the house like a satellite dish would stand a greater chance of being purchased and installed then the monsters of old. To gain flexibility in antenna size and installation, antennas and receivers will have to be designed to operate with less than perfect signal conditions. They will also have to integrate with satellite equipment much like the current DBS high-definition receivers have integrated a broadcast DTV tuner in the same set-top box.

GETTING THE WORD OUT

One of the issues with the DTV transition is the lack of promotion. On October 4th, FCC Chairman Michael Powell kicked off a multi-year effort to educate the public about HDTV by broadcast TV, cable or satellite. This effort is no doubt due to confusion in the marketplace. With many more HDTV monitors being sold then DTV tuners, the transition is moving much slower than the government anticipated. Even as most of the broadcasters have their DTV transmitters on the air and HDTV programming is increasing daily, our audiences don't know what's happening. There are very few promos for HDTV by stations or the networks. But cable and satellite are running promotions for their HDTV services regularly. Cable and satellite do have one advantage over broadcasters and that is with so much available ad space, they are able to place their promos in a lot more programs. The satellite service VOOM has bought infomercial time on local stations to promote their service. Unless broadcasters also promote their HDTV offerings or multi-cast services, people may start to think that HDTV is another subscription service. And according to an article in the September 13th issue of Broadcasting and Cable, the cable and satellite industries are targeting the 20 million homes that either use over-the air TV or don't have a TV for growth. Cable subscription has been flat for the last few years and may be decreasing as satellite takes away some of their subscribers. Satellite is growing, but that pace may be slowing as it seems the current limit of homes that will subscribe to either service is stuck at about 85%. And this September, DirecTV announced that it was going to launch a number of satellites by 2007 that will provide over 1000 local-into-local channels in high-definition. If that isn't enough competition, in their September 20th issues, EETimes did a article on TV capable cell phones that use the COFDM broadcast standard, digital radio spectrum, or 2nd and 3rd generation cell phone technology, while Electronic Design did an article on chipsets for Japanese HDTV cellphones with 2 inch screens. And finally Wineguard has new low profile antennas for vehicles to receiver DirecTV and Dish TV.

With all this competition, how do

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CONNECTING WITH THE AUDIENCE (continued)

broadcasters get their message out? The same way as everyone else, we have to market ourselves. We do it for everyone else, why not ourselves. Sinclair has launched a website called MyFreeHDTV.com that promotes broadcast HDTV and has produced a spot for any station to use to promote HDTV. It is a start, but we may need to follow the British in using the web. Nearly every website by the British, either industry or government, links to one or more other websites on digital TV and their transition to DTV. One could waste hours going from site to site due to the large number of sites on DTV. Even with all this information and the success of the FreeView DTV service, there is still much confusion about DTV in Britain according to one study done earlier this year. The British broadcasters seem to have strong ties to the set-top manufacturers, which may have helped FreeView grow at the rapid rate it has, by having the set-top manufacturers helping to educate viewers.

Using the web and airtime to promote DTV and HDTV may not be enough; print ads in the local papers may be needed as well as joint promotion venture between stations and DTV set dealers and manufacturers. We may have to promote the sale of set-top boxes ourselves. Some UHF stations offered UHF antennas when they went on the air in the 60's and 70's. To promote some data and multicast services, we may have to develop our own set-top boxes and sell them like USDTV does. We may need to promote set-top boxes ourselves just to retain our over-the-air viewer if Congress votes to pull the analog plug before their are enough DTV ready sets in over-the air homes.

Whatever we do to promote DTV, we will have to be creative. Competition is increasing daily and we can not sit by and hope for the best. Just look at some of your most successful advertisers. They got successful by aggressive marketing. Broadcasters became successful because we were the only ones that were able to reach nearly everyone in our market area. That is less true today. We share the market with a number of competitors that when taken together come close to number of homes we reach. We still have around 45% of TV viewers overall, but there are times when we are getting beat by programs on other delivery systems. We will never have all the viewers like thirty plus years ago, but we need to try to keep as many as possible, no matter how they receive us. But stations will have to devote the time and money for proper promotion, if they want to stay alive. They are needed because having a group of strong local stations provides choice and diversity in local news and programming. They also provide a few hundred jobs in the community that could be lost if TV broadcasting goes away.

FINAL COMMENTS

These articles in the last three months were meant to provide a little information on the state of TV broadcasting and give some ideas to deal with some of the problems that our industry has to deal with. Every day there seems to be more people taking aim at TV broadcasters. There are new competitors and technologies weekly and someone always wants some of our spectrum. Thirty-some years ago, before satellite delivery of programs and when cables primary purpose was to provide clear pictures of the local stations, it was said that advertising could only support two and a half national networks and independent stations could only survive in the top 25 markets. In the late 70's and early 80's, we had a UHF station building boom, but then cable discovered the satellite which took some of the wind out of our growth boom. We now have 10 over-the-air networks: ABC, CBS, FOX, NBC, PAX, PBS, Telemundo, Univision, UPN, the WB, and a number of religious station groups. But, we have been joined by a couple of hundred cable/satellite networks and their many variations. As we have grown, we have decreased our viewership by half even as we doubled the number of TV stations.

The only way to remain competitive is to promote our programming and educate both the viewer and suppliers of the consumer equipment on the latest technologies. We also have to be involved in the development of new consumer technologies that affect the reception of our programming. We cannot afford to lose our over-the-air viewers, and we need to remain a major force to the viewers that subscribe to a multichannel program supplier, as the FCC likes to call cable and satellite.

There also needs to be a big educational effort about over-the air reception of television. One measurement of the disconnect with television viewing and over-the-air reception was a headline above the Sound and Vision masthead in the June, 2004 issue. The headline was "Wireless TV is Here" with the article being about an LCD Screen that received its input via a WI-FI signal from a separate box with a tuner that could be connected to a cable or antenna outlet. There are regular articles about wireless music and video systems like this one. Maybe the original wireless entertainment system –broadcasting— needs to start using the term wireless as part of our promotion. Maybe then we can get some respect by the electronics and computer industries, regulators, other media, and the public.

LOCAL LEGALS

Compiled by Tom Smith

DISMISSED

The following applications were dismissed by the FCC on September 24th: A LPFM on 92.9 MHz for *Come Pray With Us Radio Association* that was to be located in Whitewater, WI was dismissed, as was an application for a FM translator on 92.7 MHZ in Verona by Sister Grace, Inc. The dismissals were announced on September 29th.

PROPOSED

LPFMs have been proposed for Janesville, WI by JMJ Dove Radio Association, and in Beloit, WI by St. Jerome Educational Association. Both LPFMs would operate on 92.9 MHz. The applications were announced on September 29th.

GRANTED

The FCC granted an application for a new LPFM station to the Wisconsin Polka Society, Inc. for Dane, WI. The station will operate on 97.1 MHz and will be located at the intersection of Highway 113 and County Trunk V. The antenna will be 26 meters above average terrain and 12 meters above ground level. The FCC also granted a translator application to the Regents of the University of Wisconsin for a FM translator for Madison. The Translator will operate on 107.9 MHz with 38 watts and be located at 72 Meters on WHA-AM's tower. The call letters are W300BM. Both applications were granted on September 16th and announced on September 24th.

On September 24th, the FCC granted seven LPFM licenses for the Madison, WI area. All of the licenses are for 99.1 MHz. The licenses were granted to the following groups.

St. Matthew's Evangelical Lutheran Church, 30 Dempsey Road;
Corner Stone Church;
Health Writers, Inc.;
Youth with a Mission, Inc.;
Common Ground Church;
Sun Prairie Community Church, 5711 Reiner Road at Highway 151;
Center For Prevention and Intervention, 200 Fordham Avenue.

Both Health Writers, Inc and Center For Prevention and Intervention list their proposed transmitter location at or near West High School and the rest of the groups list the transmitter site as being on or near the Larkin Street tower. The FCC rules call for a spacing of 24 kilometers or 15 miles between co-channel class LP100 stations. Because the license information on the FCC website shows these stations to be collocated, these stations must have made some type of time sharing agreement for use of the frequency. This is allowed by the FCC for LPFM stations, although timesharing is not noted on the authorizations posted in the FCC database. These stations are limited to 100 watts radiated power at 30 Meters above average terrain.

From FCC Release (www.fcc.gov)

Comb Your Hair and Dress Nicely

By Vicki W. Kipp

We will be taking a group photo of members of Chapter 24 before the October SBE meeting at the Broadcasters Clinic. The group photo is scheduled for 6:50 PM on Wednesday, October 13 at the Madison Marriott West. The photo will be taken in the same room that the SBE meeting is scheduled in. Our Chapter meeting will begin at 7:00 PM, so you must arrive a little early to be in the group photo.

All current members of Chapter 24 are encouraged to be in the group photo. Unlike school photos, free combs will not be provided. Unlike television news, there is no wardrobe allowance. This photo will provide an update to our Chapters last group photo, which was taken 27 years ago.

September Business Meeting Minutes (continued from page 2)

Lopez (WSYT-TV/WNYS-TV, Syracuse, NY), Thomas Ray (Buckley Broadcast/WOR Radio, New York, NY), Barry Thomas (Westwood One, New York, NY), and Larry Wilkins (Cumulus Broadcasting, Montgomery, AL). All of the newly elected officers and directors will be inducted into office at the annual meeting on October 27th in Boston.

Under new business, Chapter Chair Vicki Kipp announced that an updated chapter photo will be taken before the October 13th meeting at 6:50 PM. Only current members are eligible to be in the photograph.

Chapter 24 provided cookies and beverages at the Tektronix digital seminar held on September 14th. Paul Stoffel was thanked for setting the refreshments. The Chapter officers approved this expenditure.

Under old business Tom Smith reported that the FCC extended the comment period two months for WiFi in the TV band. Other comments due around the same time are for EAS and Localism. The Report and Order is out for Digital TV.

Membership Chair Paul Stoffel reported that the chapter has 63 members listed, 43 who are certified.

Under Professional announcements, Chapter Chair Kipp congratulated Dennis Baldridge for having his EAS article "EAS Guide: Interfacing EAS into a Digital Broadcast Audio Chain" published in the July issue of Radio Guide (volume 12, issue 7) on page 22.

The meeting adjourned at 7:11 PM

The evening's program was a presentation on DVD production techniques presented by Jim Brooks of VIP Duplication & Media Services.

Submitted by Jim Magee, Secretary

DTV CHANNEL REPACK (continued from page 1)

core channels in Round Two.

Negotiation Alternative in First Round Election: Licensees may alternatively negotiate with other market Licensees for a different channel. These Licensees must also submit which of their existing channels they would elect should the negotiated agreement not be accepted by the FCC.

Flash Cut Alternative in First Round Election: Licensees with an in-core NTSC and an out-of-core DTV may turn in their DTV channel now and then flash cut to their NTSC channel at the end of transition in their market. The Flash Cut option will be judged by the FCC based on public interest criteria.

Special Provision in First Round Election: Licensees with two in-core low VHF channels may release both and participate instead in Round Two. Licensees electing a Low VHF channel or a channel subject to international coordination may seek an alternative designation in Round Three.

STEP THREE– Interference Conflict Analysis: Estimated February thru April 2005, The FCC will conduct an interference analysis on each of the First Round elections. Before beginning the Second Round, the FCC will announce which channels are "locked in" as the result of the First Round. Once a Licensee's channel is locked in, their other channel(s) are released and available in future rounds.

STEP FOUR– Second Round of Elections: Estimated July of 2005, Licensees with two out-of-core channels or stations electing in the First Round to be treated like them must make a channel election. In this Round, remaining Licensees will either select a channel preference or ask the FCC to select the best available channel for them.

Negotiation Alternative in Second Round: Licensees may negotiate with others in their market and submit the channel election resulting from those negotiations.

Flash Cut Alternative in Second Round: Licensees with two out-of-core channels may relinquish the DTV channel, operate only on the analog out-of-core channel, then flash cut to an in-core DTV channel at the end of transition. The Flash Cut option will be judged by the FCC based on public interest criteria.

STEP FIVE– Interference Conflict Analysis: Estimated September 2005, FCC will conduct an interference analysis for Second Round elections. Elected DTV channels that pass interference criteria will be "locked in."

STEP SIX– Third Round of Elections: Estimated January 2006, Licensees without a "locked in" DTV channel, with a low VHF channel, or with a channel subject to international coordination issues will make a channel election or ask the FCC to specify a "best available" channel for them. All interference or other conflict situations will be resolved in this Round on a case by case basis.

STEP SEVEN– New DTV Table of Allotments: Estimated August 2006, FCC will issue an NPRM proposing a new DTV Table of Allotments providing all eligible stations with channels for DTV operations after the transition.

USE IT OR LOOSE IT: The top four network stations in markets 1 thru 100 that receive a tentative DTV channel designation on their current DTV channel will be required to build to their full authorized facility by July 1, 2005. Stations receiving a tentative DTV channel that is not their current DTV channel must serve at least 100 percent of replication by July 1, 2005. (replication is defined as the population served by the station's 1997 facility but based on the 2000 census)

All other commercial and noncommercial DTV licensees that receive a tentative DTV channel on their current DTV channel must build their full authorized facility by July 1, 2006. Stations receiving tentative DTV channels that are not on their current DTV channel will have to build to at least 80% replication on their current DTV channel by July 1, 2006.

OTHER R&O HIGHLIGHTS:

• Satellite stations will be required to participate in the election process but will have additional flexibility.

• The simulcasting requirement was eliminated but could be reinstated nearer the end of transition.

• The previous DTV minimum hours of operation schedule was not changed.

• Broadcasters have 120 days from publication of the R&O to fully implement the ATSC Program System and Information Protocol (PSIP) standard.

• After an 18 month transition period, the FCC V-Chip rules will apply to certain Digital integrated receiver/displays and separate standalone DTV tuners.

• Broadcasters captioning digital programming must include EIA-708 data.

• DTV stations must follow the same rules for station identification as analog stations. If a station chooses to include its channel number in its station ID, it must use the major (analog) channel number.

• The FCC approved in principal the use of Distributed Transmission technologies.

FCC Rulemakings

Compiled by Tom Smith

MD Docket No. 03-185
Amendments of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translators, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations

On September 9th, the FCC adopted rules for the transition of TV low-power stations and translators to make the transition to digital operation.

All translators and LPTV stations will be required to make the transition to digital, with the FCC determining when these stations are required to make the change at a later date. Stations may convert their current channel to digital (flash cut) operation. Applications to convert these channels to digital will be first-come, first service, with conflicts being settled by auction. Stations will also be able to request a second channel for digital as a companion to their analog channel.

All low-power TV stations and translators are to operate on Channels 2 through 51 with limited operation allowed on channels 52 through 69 for those unable to find a channel on 2 through 51. Digital channels used as companions to analog channels will not be allowed and any users will have to coordinate with the new wireless and public safety users on channels 52 through 69. All LPTV and TV translator stations operate on a secondary basis to all primary users.

All digital stations in the LPTV service must use the protected contours of Class A LPTV Stations and the method for computing the protection contours must follow DTV interference prediction methods. The FCC elected not to establish a TV booster station class at this time. The full Report and Order was released on September 30th and is as long as the Report and Order for the recent DTV rules.

MB Docket No. 03-15; RM 9832
Second Periodic Review of the Commissions Rules and Polices Affecting the Conversion To Digital Television.

On September 7th, the FCC released the full Report and Order on the most recent rules on the transition to digital television. These rules cover the various steps and the timetable for making the final election of the channel each station will operate on at the end of the digital transition. This timetable was covered in last months newsletter.

In other actions in this rulemaking, the FCC freed stations from simulcasting their analog programming on their digital transmitter to allow broadcasters to the flexibility to create "innovative, value added programming". The FCC also acted to require broadcasters to provide EIA-708 closed caption capability as well as support EIA-608 on the analog down-convert output.

The FCC refused to require that all new analog TVs be labeled to the fact that they will be not be able to receive the digital only signals after the transition date. The FCC also required DTV stations to identify themselves using their call letters and community. If they use a channel number it must be that of its major or analog channel.

The final issue discussed in this Report and Order was Distributed Transmission Technologies which the FCC said it would allow on a case-by-case basis under Special Temporary Authorizations and conduct further proceedings on the issue.

Anyone involved with the final election of their DTV channels should download a copy of the Report and Order, as the discussions on the election rules are quite lengthy and involved. There are also separate appendixes that give copies of the proposed forms for electing your final channel.

MB Docket No. 00-167
Children's Television Obligations of Digital Television Broadcasters

On September 9th, the FCC adopted a number of rules concerning broadcasters obligations for childrens educational and information programming on digital stations. In the new rules, stations must air at least three hours of children's educational and information programming a week on the main digital channel with an additional three hours a week of children's programming per any additional channel; programming must be aired on free channels to be counted. The additional hours of childrens programming could be aired on a single channel or multiple channels as long as the main channel airs three hours of children's educational and information programming.

Other requirements include a requirement to air the same program in the same time slot with preemptions being limited to less then 10% of the time. The program can be moved to a different channel, if it airs at the same time and adequate information on the move is made. All digital and analog childrens educational and information programming will be required to display the logo E/I during the programs. This requirement extends to non-commercial stations as well. For programs for children under 12, FCC mandated commercial limits in childrens programming is extended to both free and subscription channels in the digital environment. The FCC is also limiting the use of web address in programs aimed at under 12 year olds to sites that are program related or non-commercial. This requirement also affects both analog and digital telecasts. Finally, the FCC is now considering a promo for programs not considered educational to be commercial matter.

From FCC Releases (www.fcc.gov)

Thank you to Paul Stoffel for acquiring and setting up the refreshments on behalf of Chapter 24 at the Tektronix DTV Technology seminar in September. Thanks to Steve Paugh for arranging the September program at VIP.

Phonograph Club Meeting on October 24

By Vicki W. Kipp

Calling all phonograph enthusiasts: the Wisconsin Chapter of MAPS is meeting in Madison. MAPS stands for "Michigan Antique Phonograph Society." You can learn more about MAPS at www.lrbcg.com/Pogo/MAPS.html. The Wisconsin Chapter of MAPS exists as a subset of the much larger MAPS organization, and is geared towards collectors of phonographs, records, and music. Membership in the Wisconsin Chapter of MAPS is a separate membership from a MAPS membership, with annual dues for the Wisconsin Chapter at $7 per family. Members receive four issues of The Badger Talking Machine each year. MAPS members meet on a quarterly basis to share their collections, spread knowledge, and to socialize.

The Wisconsin Chapter of MAPS is meeting in Madison at 1:00 PM on Sunday, October 24. The meeting will be held at Paragon Video & Stereo (www.paragonvideoandstereo.com) located at 1905 Monroe Street in Madison. Meeting hosts are Paragon owners Steve and Mary Puntillo along with Paragon employee Scott Malawski.

After a short business meeting, attendees will view Steve's fantastic collection of communications equipment including Marconi and Edison electronic and telegraph equipment, wind-up Victrolas, old microphones, and rare vacuum tubes. Scott will share his rare phonograph collection, which includes Bettini, Columbia, and Pathe phonographs. When the meeting concludes, attendees are invited to a dinner at China One West at 518 Grand Canyon Drive on the west side of Madison.

Even if you can't attend the Wisconsin MAPS meeting at Paragon Video, I encourage you to visit the store sometime. In addition to a plethora of antique audio and video equipment, the store displays Loewe HD televisions.

Paragon Video & Stereo offers unique services such as turntable repair and restoration, loudspeaker repair and refurbishing, and hook-up of and training on existing home A/V systems. When visiting the store, I was impressed by the large assortment of used television remote controls they had in stock for people who have lost or broken their remote control. Paragon Video and Stereo accepts trade-ins toward new or used equipment.

CSRE or CPBE Assistance Needed

Dennis Baldridge, member of SBE Chapter 24, is looking to upgrade to Certified Professional Broadcast Engineer and needs one more letter of recommendation from either a CSRE or CPBE. He is looking for someone willing to drive out to Richland Center, WI radio stations WRCO FM & AM and review his work. If you are willing to help with this process, please contact Dennis at 608-489-3999 or baldridge@characterlink.net.

CHAPTER 24 SUSTAINING MEMBERS

RECENT RENEWALS:

Sony Broadcast

THANKS TO ALL OUR SUSTAINING MEMBERS:

Alpha Video
Belden Wire and Cable
Broadcast Richardson
CTI
Clark Wire and Cable
Full Compass Systems
Harris Corporation
Heartland Video Systems
maney-logic
Norlight Telecommunications
Roscor Wisconsin
Scharch Electronics
Sound Devices, LLC
Swiderski Electronics
Token Creek Productions
WISC-TV 3
WKOW-TV 27
WMSN-TV 47
WMTV-TV 15
Wave Communications
Wisconsin Public TV

Thanks to WISC-TV for maintaining the web server for the Chapter 24 Web page!

Thanks to WKOW-TV for providing copying and folding facilities for the Chapter 24 newsletter!

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SBE Chapter 24 Newsletter
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FIRST CLASS MAIL

Newsletter edited on Pagemaker 7.0 by: Mike Norton
Contributors this month: Dennis Baldridge, Leonard Charles, Vicki W. Kipp, Jim Magee, Tom Smith, Gary Timm, and Tom Weeden.
Thanks to Leonard Charles for his work on the Chapter 24 WWW page.

OCTOBER MEETING and PROGRAM

Society of Broadcast Engineers
CHAPTER 24 MADISON, WISCONSIN
Wednesday, October 13, 2004

UPPER MIDWEST REGIONAL SOCIETY OF BROADCAST ENGINEERS MEETING
SPECIAL GUEST SPEAKER - WINTON WILCOX

Winton W. Wilcox is a tower industry veteran who owns a tower technician training school called ComTrain LLC. Headquartered in Monroe, Wisconsin, ComTrain is a training company that specializes in tower safety and tower technology training. Wilcox travels all over the world teaching classes such as 'Tower Climbing Safety and Rescue,' 'Train the Trainer,' and 'Basic Tower Technology' on location. Wilcox delivers training throughout the United States and in Canada, Mexico, the Caribbean, Central America, South America, Egypt, Indonesia, and Europe.

Learn more at www.comtrainusa.com or by reading "Learning to Climb Safely" in the December 2001 SBE Chapter 24 Newsletter.

6:00 PM - Reception (Taco Bar)
Marriott- West
1313 John Q. Hammons Drive

6:50 PM - SBE Chapter 24 Members Group Photo in back of meeting room

Meeting and Program at 7:00PM
Marriott- West
1313 John Q. Hammons Drive

Visitors and guests are welcome at all of our SBE meetings!

2004 UPCOMING MEETING/PROGRAM DATES:

Day	Date	Program
Thursday	November 18, 2004	Certification Night
Wednesday	December 15, 2004	Holiday Party

Program Committee:	Steve Paugh	Fred Sperry	Steve Zimmerman
	277-5139	264-9806	274-1234