



**Chapter 24, Inc.
Madison, Wisconsin**

Society of Broadcast Engineers February 2001



**TOWER INDUSTRY PART 2 - THE
CAREER OF A TOWER TECHNICIAN**

By Vicki W. Kipp

This is part two in a series of articles about the tower industry. Last month, we learned about the development and operations of a tower company. This month we will discuss the career of the tower technician.

A CRITICAL SHORTAGE

It is the best of times and the worst of times for the tower industry. Tower contractors are in high demand, but there is a serious shortage of qualified tower technicians. Tower companies are forced to turn away work because of the employee shortage.

Practically every industry has felt the effects of a tight labor market during the past few years. Certainly, as broadcast engineers, we've seen the hiring pool dwindle. The tower industry faces an additional challenge because of the nature of the job – risky, physically demanding, working in extreme weather conditions, and requiring travel. Position descriptions often have the following demands: ability to climb towers and work efficiently at great heights, knowledge of proper methods of raising scaffolding, knowledge of broadcast communication antenna systems and equipment, knowledge of federal and state regulations pertaining to the lighting and painting of towers, knowledge of paint application, and the ability to read and follow structural detail drawings of towers and schematic drawings of electrical circuits. It takes physical strength and courage to perform this job, as well as expertise in electronics, maintenance, and equipment installation.

Soaring growth in the industry during the past few years has fueled the strong demand for tower technicians. Most tower companies are
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Next Meeting:

**Tuesday,
February 20, 2001**

**AES/EBU Digital
Audio**

**Dutch treat Dinner
at 5:30 PM**

**at Babe's Grill and
Bar
5614 Schroeder Rd.**

**Meeting
and Program
at 7:00 PM**

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SEE DIGITAL TV IN OPERATION AT ENGINEERING EXPO!

By Steve Paugh

SBE Chapter 24 will give a public demonstration of Digital TV at the University of Wisconsin 2001 Engineering EXPO. Engineering EXPO is held in the mall area and surrounding buildings of the College of Engineering in Madison, Wisconsin. EXPO will run from Thursday, April 19th through Saturday, April 21st. The hours of operation will be 9 AM to 5 PM. For more information on EXPO, visit <http://www.cae.wisc.edu/~expo/>.

As you recall, Chapter 24 gave a DTV technology demonstration at the

1999 Engineering EXPO. This time, we will offer a practical demonstration of currently available receivers using off air reception. We hope to educate the public on current programming available and how one can view DTV in their own home.

For the first time in our history, we have a whole generation of young people who have no idea that TV can be received over the air. The pervasiveness of cable TV and Satellite dishes have made the TV antenna an anachronism, which requires us to educate the public on its function and installation. We will

also update our static display materials on the technology of DTV and produce an informative handout.

I would like to invite the membership of Chapter 24 to once again lend their technical talents and expertise to this excellent public relations and teaching opportunity. If you or your station would like to assist in this demonstration, please contact any of the officers of SBE Chapter 24 or myself at spaugh@wisctv.com. We are also looking for corporate sponsorships and assistance with display technology and literature. I

(continued on page 3)

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January Business Meeting Minutes

Chapter 24 of the Society of Broadcast Engineers met on Thursday, January 18, 2001 at WISC-TV Channel 3 in Madison, Wisconsin. There were 27 members in attendance, 19 of who were certified, and 4 guests.

Chairperson, Kevin Ruppert, called the meeting to order at 7:00 PM. Minutes of the December meeting, as published in the January newsletter, were approved with a correction. The following information was omitted from the December Meeting Minutes: For the December meeting, Paul Stoffel presented on the topic of Vertical Blanking Interval Systems, along with Mike Norton and Dan Maney. Paul demonstrated Web TV.

Membership Chairperson, Paul Stoffel, reported that a few Chapter 24 members have had address changes.

Newsletter Editor, Mike Norton, reported the deadline for the next newsletter as midnight on Friday, February 9, with the folding party the following Wednesday, February 14 at WKOW-TV beginning at 5:30 PM.

Sustaining Membership coordinator, Fred Sperry, announced that Chapter 24 has 24 sustaining members. Sarch Electronics recently renewed their membership. Fujinon is a new sustaining member.

Program Committee, Denise Maney, announced that ADC would present on the topic of AES audio for the February 20, 2001 meeting at Babe's Grill & Bar West. For the March 2001 meeting, Chapter 24 will present Youth Night at Madison Media Institute.

Certification, Jim Hermanson, reported that several people are registered for the February 9 – 19 local exam period. The application deadline was on December 31, 2000. The subsequent local exam period will be June 8 – 18. Jim is reviewing one application for re-certification.

Frequency Coordinator, Tom Smith, gave a frequency coordination update. Tom announced that Channel 68 in Fond du Lac should be in operation as they have applied a license to cover their construction permit. This facility is within a 65-70 mile radius of Madison. Channel 68's proximity will affect those who operate wireless microphones on channel 68. This will be significant when ESPN and ABC come to Madison to cover football games. Channel 68's frequency will primarily affect Sony wireless microphones. Smith will make further inquiries into Channel 68.

Chairperson Kevin Ruppert adjourned the business meeting at 7:07 PM.

For the evening's program, Leonard Charles, Kevin Ruppert, and Jim Hermanson showed us the development of WISC's digital channel, WISC-DT.

Submitted by Vicki W. Kipp, Secretary

Tornado Awareness Week Update

By Paul Stoffel

The National Weather Service will not issue a TOR (Tornado Warning) EAS event code on April 19, 2001, during Tornado Awareness Week. Gary Timm and Rusty Kapela have reported that the NWS headquarters has forbidden the Sullivan Office, and other Wisconsin NWS Offices, to send a "real" TOR code. Instead, the NWS will use the RWT event code. Timm and Kapela will provide more information as April nears.

This statewide, first-time TOR drill was originally announced as part of the updated State EAS Plan in April, 2000. The TOR would have made EAS and Weather Radio receivers act as though there was a real Tornado Warning, but an extensive media campaign was planned to inform the public about the benefits of this test.

It was hoped that a true, end-to-end test of the Weather Alert System would have increased its awareness. Broadcast stations were encouraged, but not required, to carry this proposed TOR test.

Gary Timm is the Broadcast Chair of the Wisconsin EAS Committee. Rusty Kapela works out of the Sullivan NOAA Office.

DIGITAL TV AT ENGINEERING EXPO (continued)

would like to form an EXPO committee at our February chapter meeting, and would like to thank SBE member Craig Bluschke who has offered us a location in Engineering Hall for our demonstration.

This is our chance to bring the SBE and DTV to the public in a positive light and to demonstrate that DTV is a reality and available to the average consumer. Bring your ideas to the next meeting!

AMATEUR RADIO NEWS

By Tom Weeden, WJ9H

- Amateur radio operators are assisting with disaster communications following the devastating earthquake in India. While some telephone service in the earthquake zone has been restored, amateur radio was the primary link to the outside world in the immediate aftermath of the January 26 earthquake. Stations are handling health-and-welfare traffic on 14.160 MHz. Amateurs in the hard-hit city of Bhuj have set aside 14.260 MHz for the same purpose. Indian amateurs have asked the worldwide amateur community to keep clear of these and other frequencies being used in the earthquake relief effort.

- Recovery efforts for the troubled AO-40 amateur radio satellite continue after contact with the new satellite was re-established on December 25th. The Amateur Satellite Corporation (AMSAT) reports that by April the satellite will receive better solar panel illumination, and sun sensors will allow attitude control to be restarted. The spacecraft is spinning excessively, around 17 RPM, and efforts to slow down rotation are underway. Pre-launch estimates were that the satellite would not be available for amateur radio use for nearly a year after launch, but even with the ongoing problems, thanks to the hard work of the commissioning and recovery teams, this time appears to be shortening.

(Excerpts from the American Radio Relay League's and AMSAT's web sites)

SBE RESUME SERVICE

Want to get your resume out to employers? Participate in SBE's new Resume Service, available to SBE members only, free of charge.

Call the SBE National Office at (317) 253-1640 or e-mail Scott Jones at kjones@sbe.org for a Resume Service participation form.

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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TOWER INDUSTRY PART 2 (continued from page 1)

continuously seeking new employees with wireless skills.

FINDING NEW EMPLOYEES

Tower companies must find inventive ways to attract qualified employees. Jeff Emerson, Personnel Manager for Wave Communications/Skyline, uses several methods of recruiting including advertising and referrals from current employees. Jeff has recruited several people in a less conventional manner. When he wears his company jacket in public, the tower logo often attracts interest from passersby. Occasionally, people will approach Jeff because of the jacket to ask questions and express interest in working in the industry.

Paul Jensen, co-owner of National Tower Service, L.L.C. finds that referrals from current employees are an effective way to hire new technicians. He says, current employees naturally want to work with people who they get along with and who they trust to do a quality job. Since the tower crew works together as a team, the established employees want new team members to be competent technicians on whom they can depend. Often, referrals will be friends or relatives of the employee.

Other companies, who feel that there are too few qualified employees available within the industry, are looking to other industries for employees with transferable skills. Tower related disciplines include site acquisition and zoning, and construction management.

PROFILE OF A TECHNICIAN

In the past, the type of individual who would want to be a tower technician



Tower technician employed by 'Reflections' of North Carolina installs antenna for WISC DTV. Photo by Leonard Charles.

was often a young risk-taker who had not settled yet down. Sometimes, that is still true. But the increased demand for competent climbers has caused wages to increase progressively. The increased wage and more stringent job qualification requirements have brought more mature individuals into the tower technician work force. When surveyed, Wave Communications/Skyline said that the average age range of their technicians is between 28 and 32.

Although the image of a tower technician may be that of a young person, youth is less a requirement for the job than physical fitness and the ability to work outdoors. There are tower technicians in their fifties who have no problem performing this rugged work. When tower technicians decide that they want to move on to a different career, most of them continue to work in the tower industry in project management or supervisory roles.

To improve job satisfaction for tower technicians, some tower

companies offer a career path for technicians. Companies are also offering an attractive wage and a benefit package.

TRAINING

Only 20 percent of new hires at Wave Communications/Skyline have previous tower experience. This creates an

eminent need for training. The company has an in-house training center where training begins with climbing skills and working safely at an elevated height, followed by guidelines and work practice principles from the National Association of Tower Erectors (NATE). Technicians receive connector training from vendors such as the Andrew Institute, Commscope, and Cablewave. Once in the field, new technicians receive hands-on training from foremen and leadworkers on antenna and line principles and installations, as well as steel erection. Lastly, technicians receive specialized training in broadcast systems, PCS/Cellular systems, guyed tower erection with a gin pole, water tower and roof top installations, lighting systems, and inspection procedures.

National Tower Service, L.L.C. also has an in-house training program for new hires which covers personal protective equipment, job duties, and identifying potential hazards at a the job site. They use

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TOWER INDUSTRY PART 2 (continued)

reference books and tapes from NATE for classroom training. Their training program is approximately three months long, but the length of training ultimately depends on a new employee's previous experience and skill level. Safety training is done on a continuous basis. Human Resource Director Angel Schwoerer says, "We feel the best way to help employees work safely is to provide them with the proper tools and equipment to do their job, and to allow the employee ample time in the field working with experienced co-workers to see and learn how to do the job safely and efficiently."

Attending a professional school is another way to learn tower technician skills. Ellis Fall Protection Institute in Wilmington, Delaware offers on site Tower Climbing classes. At the two-day course, participants can learn basic fall protection and arrest, safe climbing procedures, and rescue techniques. Fall protection and arrest includes conceptions and misconceptions in the industrial setting, determination of suitable anchorage points, new standards and designs for connection, selecting body holding devices, and standards and regulations impacting the industry. For the topic of safe climbing, students will learn about ropes and knots, using mountain climber principles in an industrial tower setting, lead climbing, and anchors and belays. Rescue involves techniques and safe practices for a rescue operation with limited equipment or manpower, emergency packing of casualties, first aid consideration in rescue situations, casualty retrieval, and preparation of a rescue kit.

Professional schooling can be

found closer to home. The ComTrain Institute operates in Monroe, Wisconsin. ComTrain courses are Basic Tower Technology; Tower Climbing Safety and Rescue Training; and Instructor Training. The Basic Tower Technology course gives an overview of constructing and maintaining wireless communication sites. It teaches the skills and regulations necessary to build turnkey sites: selection and construction of a site; and maintenance and inspection of the finished site. In the Tower Climbing Safety and Rescue Training course, topics include all OSHA training requirements related to Personal Fall-Arrest System (PFAS), site hazard assessment, Personal Protective Equipment (PPE) and emergency planning related to tower sites. In the classroom, students learn about fall protection; site hazard assessment; tools and equipment including Occupational Protective Equipment (OPE); climbing mechanics; non-standard structures; and rescue equipment and techniques. Field Practice Tasks include hazard assessment; vertical and horizontal lifelines; rescue techniques; equipment selection and usage; ascending; descending; and maneuvering on the structure. The ComTrain Institute has an 80-foot tower for students to practice climbing skills on.

A DAY ON THE JOB

Working at any height above ground level involves risk, but working in the intense vertical environment of a tower involves more risk than most jobs. Weather conditions ranging from extreme heat to bitter cold can make the job even more treacherous. But crews do not stop work just because weather is inclement. They will stop for high winds, heavy rain, or

extreme cold. For example, Wave Communications/ Skyline only had one day where conditions prevented them from working during the past year. On the days that it is not possible to climb, they try to work on the ground or inside.

The job duties of a tower technician may include assembling and erecting a tower; installation of a foundation, grounding system, feedlines, and antennas; troubleshooting antenna system problems; inspecting and relamping a tower; and making structural modifications to towers to increase load capacity.

Tower technicians are sometimes referred to as "riggers." Although the job titles "tower technician" and "rigger" may sound synonymous, they have different meanings. A rigger is a person who specializes in the lifting and hoisting of material. Rigging involves block and tackle principles, sling angle principles, rated capacities of rope (wire and other), hoists, and hooks. A tower technician needs to be a competent rigger, as well as a qualified steel erector, and a competent feedline and antenna technician.

MOTIVATING FACTORS

After considering the strenuous nature of the job, you may wonder what motivates people to become tower technicians.

Jeff Emerson explains it best: "The new work practices limit the risks dramatically, which opens the door for folks to feel confident in performing in a very unique profession. The motivation derived from erecting a tower, something that has obvious

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CHANGING OF THE GUARD

By Tom Smith

FCC Chairman William Kennard resigned effective January 19th, coinciding with the departure of President Bill Clinton from the White House. President Bush appointed FCC Commissioner Michael Powell as Chairman. Powell is the son of Secretary of State and former General Colin Powell and is a former Justice Department anti-trust lawyer. It is normal procedure for the Chairman to resign when the White House changes occupants.

In one of his final actions as Chairman, Kennard sent a letter to the Chairman of the Senate committee on Commerce, Science and Transportation Senator Ernest Hollings concerning the DTV transition. Hollings was serving as Chairman from January 3rd to January 20th when the Democrats had the majority because of Vice-President Gore still holding office after the senate split 50-50. In his letter, Kennard requested that Congress amend the law to require all analog TV stations on channels 52-69 to give up their licenses on December 31, 2006, so that the spectrum can meet competitive bidding requirement of the Balanced Budget Act of 1997. He also requested that an escalating fee be charged for all analog TV stations on channels 2-51 after January 1, 2007. This would be an incentive for broadcasters to make their transition to DTV. He suggested that the proceeds go to pay for the conversion of public TV stations to digital,

particularly smaller stations.

He also asked that Congress pass a law that would require all new TVs over 13 inches to include the capability to receive DTV transmissions. He noted that there were computer cards priced under \$150 that could receive DTV transmissions and the cost of the chips should go down, if produced in large enough amounts for installation in all new larger screen TVs.

New Chairman Powell made his views known in a press conference on February 6th. He stated that he would be deregulatory in policy concerning telecommunications and media issues and be less of an activist than the Clinton appointed Chairmen, Reed Hundt and William Kennard. Powell said he would not promote policies based on public interest standards like Hundt and Kennard. He said that he was skeptical of ownership caps on broadcast companies promoting diversity of the airwaves. He also said that the FCC had no role to play in regulating content of broadcasters such as TV violence or issues such as free airtime for political candidates.

When asked about the so-called "Digital Divide," he stated that government policy cannot guarantee that there will be cheaper access to new technology such as DTV or computers for those at the lower income levels.

Public interest groups were critical of Powell's statements and felt that he

was moving further to the right than expected.

Television stations that are lagging in the transition to DTV may have some hope from the Powell chairmanship. In comments before the Association of Local Television Stations in January, Powell stated that "I'm no fan of these expectations about the time frame in which this transition is going to occur." He said that history has shown that no consumer transformation such as VCRs or CDs have happened in such a time frame. In the current rulemaking action, he has stated that Congress may need to take another look at the deadlines.

Other changes will be occurring within the Commission as Commissioner Harold Furchtgott-Roth announced that he will not seek another term. His term ended six months ago and he has been staying on until a successor is appointed. Commissioner Susan Ness was reappointed by President Clinton on December 18th after the Senate failed to act on her reappointment before going out of session. Her appointment will last for a year unless the Senate acts. Senator John McCain is opposing her reappointment as he feels persons serving on the FCC should hold one term.

From FCC releases (www.fcc.gov), NY Times (www.nytimes.com), Broadcast Engineering (www.broadcastengineering.com) and Broadcasting and Cable (www.broadcastingcable.com)

TOWER INDUSTRY PART 2 (conclusion)

daily progress, is also a draw. This is similar to the satisfaction found, though on a much larger scale, in turning a stack of lumber into a piece of furniture, emptying the inbox folder on the computer, or turning a downed tree into a neatly piled cord of split firewood. Additionally working in a high-tech, fast-paced profession has unique draws, as well as the obvious value of an interesting answer to the mundane question, "So what do you do for a living?"

CONCLUSION

Next month, we'll continue our discussion of the tower industry by exploring tower climbing equipment and safety issues.

Information for this article came from the following sources: ComTrain; Ellis Fall Protection Institute; National Tower Service, L.L.C.; Wave Communications/Skyline; and Kristen Beckman,

"Tower Firms Face Employee Shortage" RCR Magazine, January 3, 2000.

SBE CHAPTER OF THE AIR:

HamNet meets the second Sunday of each month at 0000 GMT on 14.205 MHz. Hal Hostetler WA7BGX is the Control Station.

SBE Short Circuits - February 2001

By John L. Poray, CAE
SBE Executive Director

SBE SEEKS CANDIDATES FOR NATIONAL FREQUENCY COORDINATION DIRECTOR POSITION

The Board of Directors of SBE has approved the creation of the position of Frequency Coordination Director on the SBE national staff. The Frequency Coordination Director will be responsible for managing the Society's frequency coordination program, help local frequency coordinators facilitate their local 2 GHz transition and manage the Society's event coordination services. The job will begin as a part-time position. Interested persons may view a job description on the SBE Web site, www.sbe.org, under the Frequency Coordination section. Questions about the position can be directed to John Poray, Executive Director at (317) 253-1640 or jporay@sbe.org.

ENNES WORKSHOPS HEAD FOR ORLANDO, LAS VEGAS AND SYRACUSE

Ennes Workshops are currently planned for 2001 in Orlando, Las Vegas and Syracuse. The Orlando program will be held at the SpringHill Suites at I-4 and Hwy 436 in Altamonte Springs on Friday March 16 from 9:00 am to 4:30 pm. The tentative program will include Designing, Planning and Implementing a DTV Transmission Facility; Video Transport Considerations Outside the Digital Studio; an Overview of ATSC Activities; The ATSC PSIP Standard and Radar Technology - How to Evaluate Weather Radar for Broadcasters. The Program and location for the Syracuse workshop is being finalized and will

be posted on the SBE web site, www.sbe.org when firm. A special Ennes Workshop is also planned for the NAB Convention in Las Vegas. See the article below for more details.

ENNES WORKSHOP ON CBNT PLANNED FOR NAB CONVENTION

Many people have expressed interest in the new certification offered by SBE - Certified Broadcast Networking Technologist. More than 120 industry professionals now hold this certification rolled out less than a year ago. As a part of the 2001 NAB Broadcast Engineering Conference at the NAB Spring Convention in Las Vegas, a special Ennes Workshop will be held with the sole topic being a five-hour program on broadcast networking technology titled, "Putting the Pieces Together."

The workshop will cover network topologies and layouts, common network protocols, wiring and connector types, system standards and installation practices, maintenance, troubleshooting and connectivity issues, challenges unique to media based network platforms and an overview of digital compression technologies and related storage issues.

The Ennes Workshop will be held Saturday, April 21 from 9:00 am to 3:00 pm. Since this is the day before the convention officially opens, participants will not miss any time on the exhibit floor or regular paper sessions. Our instructor will be Terry M. Baun, CPBE of Criterion Broadcast Services and chairman of the SBE Certification Committee. Moderator will be Richard Farquhar, CPBE, President of RAF Companies and education director of the Ennes Trust. Attendees must

be full conference registrants of the NAB Convention to attend the Workshop. Attendees will have the opportunity to take the SBE CBNT examination following the workshop at 3:15 pm. It's requested that registration for the exam be made in advance, although on-site registration will be possible.


To register for the exam, contact Linda Godby at the SBE National Office at (317) 253-1640 or lgodby@sbe.org. Those not attending the Workshop but who would like to take the CBNT Exam during the NAB Convention should register with Linda to take it on Tuesday, April 24 at 9:00 am during the regular SBE Certification Exam session.

2001 MEMBERSHIP RENEWALS DUE APRIL 1

Membership renewal notices are being sent by First Class mail the week of February 5 to all Regular, Senior, Associate and Student members of the Society. Membership renewal is due by April 1. Dues for Regular, Senior and Associate members remain at the same level for the 10th year, at \$55. Dues for Student Members remain at \$15. Sustaining and Youth members renew in their memberships in the anniversary month of when they joined and receive notices at the appropriate time.

SBE NATIONAL OFFICE MOVES TO NEW LOCATION MARCH 5

Reflecting the organization's growth in members and program services, the SBE National Office will be moving to slightly larger office facilities effective Monday, March 5. The new office will be located at 9247 North Meridian Street, Suite 305 in Indianapolis, Indiana, USA. We'll be providing other reminders of the move in the March issue of the SBE SIGNAL, Membership Renewal letters and at the SBE web site. The National Office will be closed on Friday, March 2 for the move. The SBE web site will not be affected and will have no interruption in service.



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FCC Rulemakings

Compiled by Tom Smith

FINAL RULEMAKINGS

MM Docket No. 99-339; FCC 01-7 In the Matter of Video Description of Video Programming

The FCC has adopted a set of rules requiring broadcasters and multi-video programming distributors to provide descriptive audio for video programming. This is a service for those with impaired sight to allow them to receive a description of the video action along with the program audio.

The FCC will require all ABC, CBS, FOX, and NBC stations in the top 25 markets to air 50 hours per calendar quarter in either primetime or children's programming. They will also require multi-video program distributors with 50,000 or more subscribers to also provide 50 hours of programming on the top 5 nationally rated non-broadcast networks that reach 50% of the subscribers. All broadcasters and multi-video program distributors must have the technical ability to pass through the descriptive video service regardless of market size or number of subscribers. These would mean that all TV stations and cable systems must install a SAP generator. When a program provider airs an emergency message via a character generator crawl or scroll, they must also do an audio warning on the SAP channel.

Once a program airs with descriptive video, all further episodes must have it. Descriptive video may be preempted for foreign language or other program related services. DirecTV and Dish TV will also be required to provide this service.

This rule was adopted on January 4, 2001 and released on January 18, 2001. The rules become effective on April 1, 2002.

MM Docket No.00-39: FCC 01-24 In the Matter of Review of the Commissions Rules and Policies Affecting the Conversion To Digital Television

The FCC has issued a number of rules concerning DTV and also issued a future notice of rulemaking on other rules pertaining to DTV.

In the rules that were adopted, the FCC reaffirmed its decision to use the 8-VSB modulation method for DTV. With this action, the FCC rejected Sinclair Broadcasting's petition to allow the use of CODFM modulation. The FCC also adopted a procedure for processing mutually exclusive applications, and set a city grade contour for DTV stations. While a DTV signal is perfect until the signal falls below the minimum signal threshold, it was believed that a higher signal level was needed for the indoor antennas that would be used near the transmitter site. This level is set at 7 dB above the edge of service contour. The level is 35 dB for channels 2-6, 43 dB for channels 7-13 and 48 dB for channels 14-69. The FCC also clarified the maximum power limits allowed for DTV, and granted a waiver for analog stations with NTSC group delay problems due to N+1 digital assignments.

The FCC also set a date for stations to elect if they will use the channel they were assigned for DTV after the transition or return to their original analog channel with their DTV signal. Commercial stations must decide by

December 31, 2003 and non-commercial stations must decide by December 31, 2004.

The Commission issued a notice of further rulemaking on the issue of requiring TVs above some screen size to be required to have the ability to receive DTV transmissions as well as NTSC transmissions. Comments are due on April 6, 2001 and replies by May 7, 2001.

In this notice, the FCC deferred any decision on a number of issues including rules about on-channel boosters, release of some computer programs, the 85% rule, errors in the Consolidated Data Base System, Canadian border issues, changes in census information, assignments of TSID's, receive antenna planning factors, and closed captioning compatibility with digital cable systems.

This notice was adopted on January 18, 2001 and released on January 19, 2001.

From FCC Releases (www.fcc.gov)

Employment Opportunity

Television Network Control Operator


Wisconsin Public Television.

Entry level broadcast technical position at the Wisconsin Educational Communications Board TOC (Telecommunication Operations Center) in Madison. Develop your skills and build a career with this entry-level position. Switch programs on-air, monitor signals, record, store, dub, and prepare media. Involves non-traditional hours. Starts at \$11.827/hr plus comprehensive benefit package.

Requires; excellent people and communication skills plus basic knowledge of the operation of broadcast equipment and FCC rules and regulations. Also requires intermediate computer skills. Technical training and/or college or equivalent experiences preferred.

Deadline; February 19 or until filled. For special application materials, contact ECB, Larry Dokken, 3319 W. Beltline Hwy., Madison, WI 53713.

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AUCTION SETS RECORD

By Tom Smith

The auction for Personal Communications Service (PCS) spectrum ended on Friday, January 26, 2001 setting a new record. The FCC received \$16.58 billion for spectrum in the C and F blocks. The auction began on December 12, 2000 and went 101 rounds. There were 170 licenses for entrepreneurs in closed bidding, and 252 licenses open to all bidders in open bidding. Markets included New York, Los Angeles, Chicago, Boston and Washington, D.C.

Verizon Wireless, a joint venture of Verizon Communications and Vodafone Group, spent \$8.78 billion for 113 licenses including \$4 billion for two licenses in New York. Other winners were Alaska Native Wireless with ties to AT&T received 44 licenses for \$2.89 billion and Cingular Wireless, a joint venture of BellSouth and SBC Communications, received 80 licenses for \$2.35 billion.

There was some controversy concerning the entrepreneurs

licenses. Some questioned the eligibility of some of the bidders for the entrepreneurs licenses that were financed or possibly controlled by existing communication companies which were not eligible themselves.

In other auction actions, the FCC delayed the March 6th auction for licenses in the 746-764 and 776-794 MHz bands (TV Channels 60-69). The Auction will start on September 12, 2001. This delay was granted because of a request by Verizon Wireless with support from AT&T Wireless Group to allow for the companies to reassess their spectrum needs in light of the just completed PCS auction. TV broadcaster Paxson Communications argued against the delay. They own a number of stations in the channel 60-69 band and are seeking large amounts of cash from possible winners of an auction in that spectrum to vacate their TV operations, so that the winners can use the spectrum earlier.

From FCC releases (www.fcc.gov) and the NY Times (www.nytimes.com)

FCC TO REQUIRE ELECTRONIC FILING

By Tom Smith

On February 15, 2001, the FCC will require that the following broadcast license applications be filed electronically. They are Form 301, Application for Construction Permit for Commercial Broadcast Station; Form 314, Application for Consent to Assignment of Broadcast Station Construction Permit or License; and Form 315, Application for Consent to Transfer Control of Corporation Holding Broadcast Station Construction Permit or License. The FCC had previously required the electronic filing of forms

302-FM, 316 and 347.

Information on filing these forms can be found in the CDBS User's Guide which can be accessed from the electronic filing web site.

From FCC Release (www.fcc.gov)

The *Chapter 24 Newsletter* is published monthly.

Submissions of interest to the broadcast technical community are always welcome. You can e-mail your articles to: MNorton@ecb.state.wi.us



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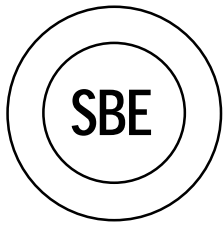


FIRST CLASS MAIL

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FEBRUARY MEETING and PROGRAM



**Society of Broadcast Engineers
CHAPTER 24 MADISON, WISCONSIN
Tuesday, February 20, 2001**

AES Digital Audio

This month the program will be a presentation by Dean Rosenthal and Tom Lorenzen of ADC on the subject of AES audio. The presentation will include a discussion of AES audio — what is it, what are the issues, pitfalls, and solutions as they pertain to TV stations and post production facilities.

Dutch Treat Dinner at 5:30 PM

**at Babe's Grill and Bar
5614 Schroeder Road**

**Business Meeting
and Program at 7:00 PM**

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

2001 UPCOMING MEETING/PROGRAM DATES:

Day	Date	Program
Wednesday	March 21	Youth Night
Wednesday	April 26	NAB Review/Elections
Thursday	May 22	EAS and Cable

Program Committee: Denise Maney 277-8001 Steve Paugh 277-5139 Fred Sperry 264-9806 Steve Zimmerman 274-1234