



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

Society of Broadcast Engineers

March 2000

TELECOM INDUSTRY NEWS

By Neal McLain

PROTECTING WMSN'S FIBER

In the eyes of a fiber optic engineer, the busiest intersection in Madison these days is the interchange where the I-12/14 Beltline crosses over West Mineral Point Road.

The congested surface traffic on Mineral Point Road is obvious. The rapid growth of the City of Madison west of the Beltline — particularly around Prairie Towne Center — has caused a huge increase in vehicular traffic. According to the Wisconsin Department of Transportation, the traffic volume on Mineral Point Road now exceeds the Department's original projections for year 2020.

But the real congestion we're talking about here concerns what's *under* Mineral Point Road: utility lines. Besides the usual water, gas, and sewer lines that exist under most public roads, at least five fiber optic lines, including WMSN's STL, cross under the Beltline at this interchange.

All of this has become relevant because of WISDOT's expansion plans. Starting next month, WISDOT will embark on a two-year reconstruction project to widen Mineral Point Road and make several other changes.

It's the kind of project that gives fiber optic engineers nightmares.

THE SIX-LANE EXPANSION

WISDOT's plans call for adding two more through lanes to Mineral Point Road. By the time the job is done, Mineral Point will have six through lanes all the way from Gammon Road to Junction Road. In the area immediately under the Beltline overpass, there will be eight lanes, six for through traffic and two for left-turn traffic (Figure 1).

(continued on page 4)

Next Meeting:

**Tuesday,
March 21, 2000**

Madison Radio Group Tour

**Dutch Treat Dinner
at 5:30 PM
Meeting at 7:00 PM**

**at Babes Bar & Grill
5614 Schroeder Rd**

**Program at 7:30 PM
at Madison Radio Group**

**2651 South Fish
Hatchery Road**

In This Issue:

Minutes.....	page 2
EAS Compliance	page 3
Amateur Radio News ...	page 3
Local Legals	page 7
FCC Rulemakings	page 9

WIRELESS APPLICATIONS TO CHANGE

By Tom Smith

On April 1st, the FCC will accept applications for certain microwave licenses by electronic means only. This is part of the introduction of the Universal Licensing System. This is a database system that allows for viewing of wireless license information on the internet. Applications will be able to be filed on the internet in the near future, with the system currently supporting a dial-up entry system. It will be mandatory to file applications electronically for common carrier services, local multipoint distribution services and 29 GHz market areas. Broadcast Auxiliary licenses and private point to point may be filed

manually, but the FCC would prefer electronic filing.

As part of the transition to the new system, the FCC will no longer accept the following applications as of March 1st: Forms 313, 313R, 402R, 415, 415T, 430, 701, 702, 703 and 704. 313 and 313R were broadcast auxiliary forms. All users must use forms 601 and 603 where appropriate. Manual applications must use the version of form 601 issued after August 1999, and form 603 issued after February 1999.

Before filing any application for a broadcast auxiliary license, read the notices from the wireless bureau on the

new licensing. Notices were released on February 4th (DA 00-27) and 18th (DA 00-317) with instructions on the changes, including how to use the phone system on the February 4th notice. You will also need a certification number from the local frequency coordinator when filing the application.

This is a new method of handling all wireless applications, so don't be surprised if you have some problems. There is much discussion of the changes among the SBE frequency coordinators including the use of the different forms. Checking with an attorney or consultant may also be helpful.

From FCC Notices (www.fcc.gov)

CHAPTER 24 OFFICERS

CHAIR:

Kevin Ruppert (WISC-TV)
W - 271-4321
kruppert@wisctv.com

VICE-CHAIR:

Tom Smith (WHA-TV)
W - 263-2174
smithtc@vilas.uwex.edu

SECRETARY:

Lloyd Berg (WKOW-TV)
W - 274-1234
lloydberg@earthlink.net

TREASURER:

Stan Scharch (WISC-TV)
W - 271-4321
sscharch@wisctv.com

COMMITTEE APPOINTEES

Program Committee:

Mark Croom	271-1025
Denise Maney	277-8001
Kerry Maki	833-0047
Steve Paugh	277-5139
Steve Zimmerman	274-1234

Membership:

Paul Stoffel
stoffel@vilas.uwex.edu

Sustaining Membership and Past-Chair:

Fred Sperry W - 264-9806
fsperry@ecb.state.wi.us

Special Events:

Vicki Kipp (ECB-TOC)
W - 264-9631
vkipp@ecb.state.wi.us

Certification and Education:

Jim Hermanson 836-8340
jmh@execpc.com
Tim Trendt (UW-Platteville)

Frequency Coordination:

Tom Smith W - 263-2174
smithtc@vilas.uwex.edu

National SBE Chapter Liaison:

Leonard Charles
W - 271-4321 FAX - 271-1709
lcharles@wisctv.com

February Business Meeting Minutes

Chapter 24 of the Society of Broadcast Engineers met on Thursday, February 24, 2000 at WISC-TV in Madison, Wisconsin. There were 17 members, and 5 guests present.

The meeting was called to order by Chair Kevin Ruppert at 7:03 PM. Minutes of the January meeting, as published in the February newsletter, were approved as published.

Treasurer, Stan Scharch, reported a balanced checking account that was in the black.

Kevin announced the deadline for the next newsletter would be 3-3-00 at Midnight.

It was reported that we have 23 sustaining members, with WKOW-TV-27, Richardson Electronics, Scharch Electronics, and Harris Corporation as recent renewals.

Program Coordinator, Denise Maney, announced information for the next two meetings has been published in the newsletter.

Certification, Jim Hermanson, reported that two people took SBE certification exams in February. The next opportunity for certification will be on April 11 at the NAB convention. Also, the NAB convention will be your first opportunity to take the new "networking" exam.

Frequency Coordinator, Tom Smith reported that frequency coordinators are concerned about wireless microphones presently operating on the high-UHF channels, as these frequencies are being re-allocated to other services.

Kevin reported that Chapter 24 has received our copy of the Annual Report from the SBE national office. He also reminded everyone that memberships must be renewed by April 1st. Lastly, the SBE's Leadership Skills seminars will be split into two courses this year. The first will be held from June 7 to 9 and the second will be held from August 16 to 18. Registration forms for these events are available from the SBE National Office.

Kevin adjourned the business meeting at 7:09 PM.

The evening's program on leased data communications was presented by representatives from Charter Communications / Fiber-Link.

Submitted by Lloyd Berg, Secretary

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

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

FCC LOOKING AT EAS COMPLIANCE

By Larry Wilkins
SBE EAS Committee Chairman

As a reminder to all broadcasters, the FCC began to inspect stations for EAS compliance on February 1, 1999. You should make every effort to see that your station is in full compliance with FCC EAS Rules.

The FCC requires the following to be in compliance:

- All broadcast stations must have installed an approved EAS encoder/decoder. Each station in your facility must be connected to the system. Most importantly it must be fully operational.

- All broadcast stations must transmit a Required Weekly Test (RWT), once each week, at random days and times except for the week of the Required Monthly Test (RMT).

- All broadcast stations receiving a Required Monthly Test (RMT) must re-transmit this test within 15 minutes of receiving it. (For Daytime-only stations receiving a night-time RMT, this test must be re-transmitted within 15 minutes of sign-on.)

- All broadcast stations receiving a National level alert should re-broadcast it immediately.

- All broadcast stations must have a copy of the EAS Handbook. If you do not have a Copy, go to <http://www.fcc.gov/cib/eas/handbook.htm>.

The most important item is to keep accurate records of all RWT transmitted, RMT received and relayed, and any other test or alerts that are received from the two monitoring sources assigned by your State Committee. The paper from the EAS printer can be attached to your operation log or may be filed in an appropriate folder. Chief operators should inspect these records weekly and note any discrepancies plus indicate any corrective action that has been taken to correct the problem.

The FCC has indicated that it may issue fines to stations that do not meet the EAS requirements.

AMATEUR RADIO NEWS

By Tom Weeden, WJ9H

- Hams who will be eligible for higher-class licenses as a result of the FCC's recent restructuring of the amateur radio service are scrambling to take advantage of the upcoming April 15th rules change. The FCC action, reducing the number of license classes to three and establishing 5 words per minute as the sole Morse code examination element, has caused a brisk demand for study materials.

On April 15th, hams who had previously passed a higher class written exam within the last year but had not passed the higher code speed test will become eligible for the higher class license due to the relaxed code speed requirement. Here in Madison there will likely be more people lined up to take written exams at the monthly sessions in March and April. A special "no exam" session will also take place locally on April 16th for those eligible hams to fill out their paperwork and obtain their higher class license.

- On March 1st, the FCC began accepting requests from amateur radio organizations interested in becoming club call sign administrators. Organizations which meet FCC requirements will be authorized to process applications from ham clubs or military recreation stations seeking their own call signs. This delegation of authority to volunteers in the private sector is similar to the commission's creation of the volunteer examiner program several years ago.

- A Mississippi ham arrested for interfering with his neighbors' telephones is off the hook. Bennie Stewart, KJ6TY, was arrested and charged last September under a Mississippi law making it illegal to interrupt telephone communications. Stewart asked the court to throw out the complaint on the grounds that only the FCC had jurisdiction. The court tabled the criminal action, saying it had jurisdiction over the subject criminal matters, but that the state court's jurisdiction had been preempted by federal law.

(Excerpts from March 2000 "QST" magazine)

HARRIS CORPORATION	
Communications Sector Broadcast Systems 1913 Fairoak Road Naperville, IL USA 60565	
HARRIS	
TOM HARLE District Sales Manager Radio Systems ISO 9001	telephone 1-630-420-8899 24-hr service 1-217-222-8200 Broadcast Ctr. 1-800-622-0022 facsimile 1-630-420-9171 email: tharle@harris.com
<i>next level solutions</i>	www.harris.com

SCHARCH ELECTRONICS CO.
Small Business Communications 1105 Middleton Street MADISON, WI 53717-1078 (608) 831-2266 (800) 831-2266

SONY	
Kevin Peckham Account Manager Broadcast Products Division	
Sony Communications Products Company 1200 North Arlington Heights Road Itasca, Illinois 60143 Telephone (608) 271-3778 (708) 773-6046	
Service Center	(708) 773-6037
Emer. Tech. Assist.	(201) 833-9533
National Parts Center	(800) 538-7550

Vertical Interval Remote Control	
http://maney-logic.com	

TELECOM INDUSTRY NEWS (continued)

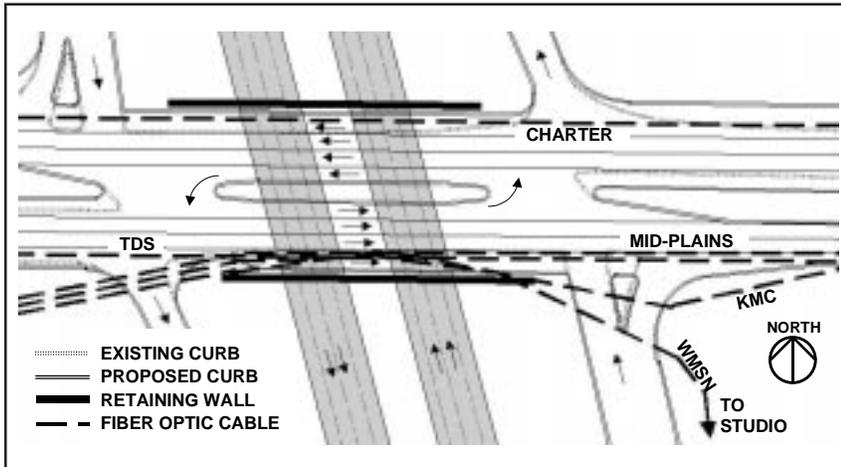
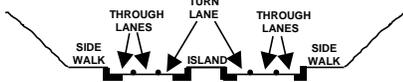


Figure 1. WISDOT Year 2000 Expansion Plan for the Interstate 12/14 Beltline interchange at Mineral Point Road. Five fiber optic cables cross the Beltline at this interchange. Drawing by the author based on WISDOT's preliminary construction documents.

In order to accommodate the additional lanes, the plans call for the construction of retaining walls. Right now, the typical cross section looks like this:



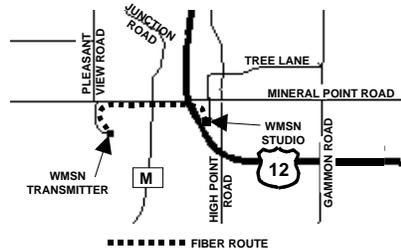
After the retaining walls are built, the cross section will look like this. Note that two new through lanes will be added.



Five communications companies own fiber optic cables in this area: Charter Communications, KMC Telecom, Mid-Plains Telephone, TDS MetroCom, and WMSN. Once the construction is completed, most of these cables will end up under pavement — either under the roadway itself or under one of the retaining walls (except for TDS, which is rerouting its facilities well away from the interchange).

WMSN'S FIBER CABLE

WMSN, Madison's Fox affiliate, owns a fiber optic cable between its studio (7847 Big Sky Drive) and its transmitter, at the Madison Community Tower, 8559 West Mineral Point Road:



This cable contains four separate fibers, all of which are used (Figure 2):

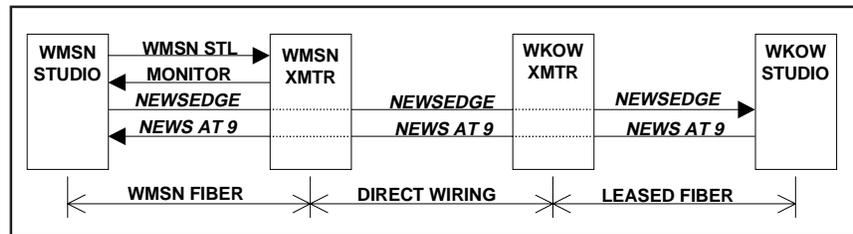


Figure 2. Video signals carried by WMSN's fiber optic cable.

- One fiber serves as an STL, carrying WMSN's program feed from the studio to the transmitter. WMSN also has a 23-GHz microwave link as a backup, but the fiber is the primary STL.

- One fiber carries the demodulated transmitter signal back to the studio for monitoring purposes.

- One fiber carries WMSN's daily news program *News at 9* from the transmitter back to the studio. This program is produced at the WKOW-TV studio on Tokay Blvd.; WKOW-TV hands the signal over to WMSN at the Community Tower.

- One fiber carries *Fox NewsEdge*, a satellite-delivered network feed of news packages for use in Fox affiliate newscasts. This signal is carried from the studio to the transmitter, and thence back to WKOW-TV for use by the *News at 9* production staff.

In view of the importance of this fiber to WMSN's operations, it's obviously essential to protect it from damage during any nearby construction projects.

To protect its cable from damage, WMSN has established contractual agreements with three companies:

- Triple E Utility Service, of Waunakee, for locating services. (continued on next page)

NATIONAL TOWER SERVICE

Daryl Snowden Paul Jensen

Office 608-884-8205 Office 608-255-0529
 Fax 608-884-6021 Fax 608-255-2599
 Mobile 608-751-8284 Mobile 608-235-8559

Jim Pianowski Tektronix, Inc.
 Central Regional Manager Video and Networking Division
 Western Area
 515 West Algonquin Road, Ste 100
 Arlington Heights, Illinois 60005
 james.j.pianowski@tek.com
 800 458-7587 ext. 6797 Voice Mail
 847 431-5755 Mobile
 847 381-4738 Home
 847 734-6797
 847 364-7582 Fax 800 452-1368 Pager

Tektronix

TELECOM INDUSTRY NEWS (continued)

Under Wisconsin's utility-protection law, any contractor contemplating any sort of excavation work must notify the owners of all underground "transmission facilities" at least three working days in advance. Within those three days, each utility company must "locate" its facilities; i.e., it must mark the location of its facilities with paint or flags. The contractor is then required to protect the facility from damage during the course of the construction work. Triple E is one of several companies that provide the service of locating transmission facilities.

- Diggers Hotline, Inc, of Wauwatosa, for locate-notification services. Diggers Hotline is a notification service owned by the state's major utility companies (see sidebar, page 6). By calling Diggers Hotline (800-242-8511), a contractor can, in one phone call, fulfill his responsibility for notifying the owners of all underground transmission facilities. Wisconsin's utility-protection law requires that all owners of underground facilities must contract with Diggers Hotline to receive these notifications.

- Communication Technologies, Inc. (CTI), of Middleton (my employer), for engineering services. CTI originally installed the fiber cable in 1986, and has since represented WMSN's interests in matters related to road construction along the route. As it happens, there's been quite a bit of construction over the years. When the cable was first installed, Mineral Point Road was a two-lane country road with drainage ditches at the sides. Since that time, the road has been widened to four lanes, curbs and gutters have been added, and the ditches have been replaced with storm sewers. In each of these projects, CTI has represented WMSN before the Wisconsin and Dane County Departments of Transportation

to ensure that the fiber cable was accurately shown on all construction drawings, and that appropriate protection measures were incorporated into the construction documents.

Fortunately, past construction projects have not directly conflicted with the fiber cable. Back in 1986, when the cable was installed, it was placed south of the drainage ditch on the south side of Mineral Point Road. When the road was widened to four lanes, the ditch was filled in, and the cable ended up several feet below the surface — so deep that the road construction work didn't affect it.

YEAR 2000 CONSTRUCTION

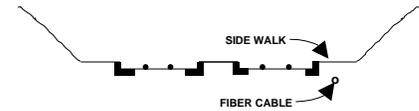
WMSN won't be so fortunate this year. This year's construction project takes place directly under the Beltline overpass, where the fiber cable isn't nearly so deep. To determine the actual depth, CTI dug several test pits (Figure 3).

The test pits showed that the fiber is located under the sidewalk on the south side of the roadway, at a depth of

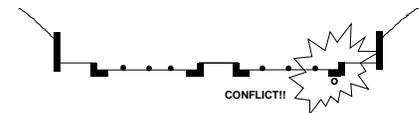


Figure 3. Test pit excavation near Mineral Point Road, August, 1999. CTI technician Jim Kjørliie (right) and an unidentified employee of InterCon Construction, Inc.

about 24 inches:



And that's going to cause a conflict when the new curb is built:



To avoid damage to the cable, WMSN will have to lower it.

The construction documents include provisions for this. Every construction company submitting a bid for this project must agree to the following:

- It must remove the sidewalk without excavating deeper than the bottom of the sidewalk.
- It must allow the owners of all affected utility facilities, including WMSN, an opportunity to lower their facilities to a safe depth.
- It must protect the facilities from damage during all subsequent construction work.

Will this procedure safely protect WMSN's fiber?

Stay tuned. We'll have a followup report when the job's done.

Chapter 24
World Wide Web Site
<http://www.sbe24.org>



Steve Paugh is the editor for the HTML Version of this Newsletter, available monthly on the SBE Chapter 24 web page.



JAMES F. DOHERTY
Traffic Supervisor
Satellite & Video Services

Norlight
TELECOMMUNICATIONS

275 NORTH CORPORATE DRIVE
BROOKFIELD, WI 53045-5818
414.792.7708 FAX: 414.792.7717
e-mail: jfd@norlight.com



<p>Jim Rigsby Account Executive Private, State, Local Government</p>	<p>Alcatel Network Systems 2800 West Higgins Road Suite 825 Hoffman Estates, IL 60195 Tel: (847) 490 2076 Fax: (847) 490 2073 E-mail: james_a_rigsby@aud.alcatel.com</p>
---	--

Panasonic
Broadcast & Television Systems Company



Atlanta 1996
The Official Broadcast
Equipment of the
1996 Olympic Games.

<p>HERB VAN DRIEL Direct Sales Manager Entertainment Systems Division</p>	<p>1707 N Randall Road E-Zip: 1-C-3 Elgin, IL 61023</p>	<p>WI Tel: 608.355.0662 WI FAX: 608.355.0663</p>	<p>HQ Tel: 847.468.5160 HQ Fax: 847.468.5161</p>
--	---	--	--

Division of Matsushita Electric Corporation of America

WISCONSIN'S UTILITY-PROTECTION LAW: THE BOUNCING BALL OF LIABILITY

By Neal McLain

The recent house fire on Erin Street underscores the importance of Wisconsin's Utility-Protection Law. In that particular case, a construction company was hired to install a "lateral" to connect the building to the water main under the street. Instead of digging a trench, the construction crew utilized a device known as a "bullet" to penetrate through the ground. The bullet hit a gas main, and the escaping gas followed the bullet hole right back into the building basement where the construction crew was working.

Fortunately, nobody was injured. The residents were away, and the construction crew realized what had happened in time to escape. But property damage was severe: the building literally exploded, then burned.

The construction crew had failed to notify the local gas utility, Madison Gas and Electric. Had they done so, they would have known about the gas main.

This failure was a direct violation of Wisconsin's Utility Protection Law, Section 182.0175 of the Wisconsin Statutes. This is the law that specifies notification and liability procedures related to excavations in the vicinity of underground utility facilities.

Section 182.0175 establishes a "bouncing ball" of liability:

- A contractor — or anyone else — planning any kind of excavation is required to notify the owners of all underground transmission facilities. The statute is intentionally broad in its definition of underground facilities: it includes every kind of facility without regard to ownership, purpose, or contents. If the contractor fails to notify the owner of any such facility, he is liable for any resulting damage.

- Once the contractor has notified the owners, the liability ball is now in their court. Each owner must, within three working days, mark the location of his facilities in the field. Markings may be made with paint, flags, or a combination of both. The color of the marking is specified in the statute

(Figure 4). If the owner fails to mark his facilities, or marks them inaccurately, he is liable for any resulting damage.

- Once the owner has marked the facilities, he has tossed the liability ball back to the contractor. The contractor must take all necessary precautions to protect the facilities. One noteworthy precaution: he cannot use any kind of power-operated excavating equipment (backhoe, bulldozer, jackhammer, etc.) within 18 inches of any marked facility. If the contractor damages any properly-marked facility, he is liable for any resulting damage.

Under this law, the Erin Street crew is clearly liable for the damage because of its failure to notify MGE.

DIGGERSHOTLINE

There are two ways the contractor could have notified MGE: either by calling MGE directly, or by calling Diggers Hotline. Diggers Hotline is a "one call" notification service; its purpose is to make it easy for contractors to comply with the notification requirements: "one call does it all." Similar one-call systems exist in every state.

When a contractor calls Diggers

- Electric power: red.
- Gas, oil, steam, petroleum or gaseous materials: yellow.
- Communications, cable television, alarm or signal systems: orange.
- Water, irrigation or slurry systems: blue.
- Sewer or drain systems: green.
- Temporary survey markings: pink.
- Proposed excavation: white.

Figure 4. Standard Colors For Marking Underground Facilities. These color standards were developed by the American Public Works Association and have been incorporated into Wisconsin's Utility Protection Law. Communications includes any kind of communications facility: telephone, cable television, or privately owned facilities such as WMSN's fiber cable.

Hotline, an operator enters the information into a computer. The computer figures out which companies own underground facilities in the work area, and relays the information to all owners via teletype or fax.

Diggers Hotline is operated by Diggers Hotline, Inc., a non-profit corporation owned by its members. Membership is open to any party that owns any kind of underground facility located anywhere in Wisconsin. The membership roster includes public utility companies, gas transmission companies, cable television companies, municipal and county governments, utility districts, and several departments of the state government. Several private companies, including WMSN, are members.

When Diggers Hotline was first organized, membership was voluntary. However, under recent changes in state law, membership is now mandatory for most facility owners. There are now only two exceptions to the mandatory-membership requirement:

- A transmission-facilities owner whose facilities are located entirely on its own property.
- A governmental unit (county, city, township, village, school district, or other special-purpose district).

Under this law, WMSN was required to become a member of Diggers Hotline.

DO YOU HAVE SBE MEETING PROGRAM IDEAS?

Is there a topic you would like to see covered at one of our local Chapter 24 meetings? Or, better yet, is there a topic that you are qualified to speak on at an upcoming meeting?

Please forward any ideas to one of the Program committee members or to one of the Chapter 24 officers.



LOCAL LEGALS

Compiled by Tom Smith

PROPOSED

Family Worship Center Church Inc. seeks permission to build FM translators in the following cities at the frequencies listed: Platteville at 91.9 MHz, Baraboo at 90.5 MHz, Prairie Du Chein at 89.5 MHz, Portage At 98.5 MHz and Richland Center at 90.7 MHz. Family Worship Center Church Inc. has applied for a number of other translators in other parts of Wisconsin and across the country. Announced by the FCC on February 1 and 2, 2000.

GRANTED

New 90.3 Mhz Marshall, WI.

The FCC has granted a

construction permit to CSN International for a new non-commercial FM station. The transmitter is to be located west of Columbus off of Highway 60. The station will operate with 3.9 kilowatts of power at 101 meters above average terrain with the height above ground of 105 meters. Action was on February 25, 2000 and released on March 1, 2000.

W33CT, Channel 33 Low Power TV, Madison, WI

The FCC has granted Trinity Broadcasting Network permission to change from channel 33 to channel 38. The transmitter will be located at 5727 Tokay Boulevard with the antenna mounted on the existing tower owned by WKOW-TV. The station will operate with transmitter power of two kilowatts and effective radiated power of 10 kilowatts. Antenna will be mounted at 478

meters above sea level. The channel 33 transmitter is currently located on Springfield Hill between Madison and Sauk City. Action on February 8, 2000 and released on February 28th.

DISMISSED

W54BH, Channel 54 Low Power TV, Madison, WI

The FCC dismissed the displacement application of Three Angels Broadcasting to move to channel 38. They had applied to increase power to 11.5 kilowatts. The channel 54 transmitter is located in downtown Madison on a high-rise building on West Washington Avenue. Action on February 8, 2000 and released on February 28th. The channel 38 license was included in the broadcast auction last fall.

From the FCC Daily Notices (ww.fcc.gov)

SBE Short Circuits -- March 2000

*By John L. Poray, CAE
SBE Executive Director*

NOMINATIONS SOUGHT FOR 1999 SBE AWARDS

Nominations are now being accepted for the 1999 SBE Annual Awards. Awards will be presented in 13 categories during the SBE National Meeting and Pittsburgh SBE Regional Convention, October 4, 2000 in Pittsburgh, PA. Chapter Awards will be presented in eight categories, including Best Convention or Conference, Best Chapter Newsletter and Best Chapter Website. For the first time, five of the Chapter Categories will have winners in two classes, recognizing achievement in both smaller and larger chapters. There are five individual award categories,

including Engineer of the Year and Educator of the Year. For more details and a nomination form, see the March issue of the SBE SIGNAL.

MEMBERSHIP RENEWALS DUE APRIL 1

Regular, Associate and Student memberships are due for renewal by April 1. Please encourage members to renew by the deadline. Renewal forms were mailed in early February. If you have not received yours, contact Scott Jones at the SBE National Office at (317) 253-1640 or kjones@sbe.org <<mailto:kjones@sbe.org>>.

MEMBERSHIP DRIVE KICKS OFF MARCH 1

The SBE Annual Membership Drive, "One New Member" will run March 1

through May 31. Each member is asked to recruit one new member during that time. New member prospects can be co-workers, friends and associates in the broadcast engineering field. Some great prizes have been donated by many Sustaining Members, along with the Grand Prize of a "Trip to Mars", as in Mars, Pennsylvania, the suburban area of Pittsburgh where the SBE National Meeting will take place, October 4. The winner will receive a round-trip air ticket from within the Continental US to Pittsburgh, two nights stay at the Pittsburgh Sheraton North Hotel, complimentary ticket to the SBE National Awards Dinner and admission to the Pittsburgh SBE Regional Convention exhibits and technical papers. For more information, see the flyer mailed to all

(continued on page 8)

615 Forward Drive
Madison, WI 53711
Phone 608-274-1515
Fax 608-271-5193
www.nbc15.com
feedback@nbc15.com

<http://www.CTIinfo.com>
email - cti@CTIinfo.com
Phone - 608-831-4636
Fax - 608-836-1840
VCR Controllers
Character Generators
Satellite Antenna Controllers
Broadcast / Cable Television Consulting

David Thormodsgaard
Broadcast Sales Engineer
thor@alphavideo.com
800-388-0008 • (612) 841-3308
Cellular (612) 860-2813
7711 Computer Avenue
Edina, MN 55435
(612) 896-9898
FAX (612) 896-9899
www.alphavideo.com

Streaming Media: Art & Application

By John Rustad

Quick, whip out your trusty Palm V and clear your schedule for an awesome teleconference - Streaming Media: Art & Application, April 27th, at the Pyle Center.

Damn, I blew it! It's winter in Wisconsin. I should have known better than to use the words "Streaming" and "April" in the same sentence. Now you're probably drifting off into a trance-like state* with visions of enticing a wily two pound brook trout into swallowing a hand-tied midge attached to the business end of your tapered monofilament leader.

Well, snap out of it! I hate to have to drag you kicking and screaming back to reality, but the term "Streaming Media," doth not refer to a tackle box full of artificial lures. Though it certainly could in Wisconsin.

Streaming Media is all the rage on the web these days. And if you've ever tried to work with it, you've probably experienced some of that rage. It's a great concept, but I know from personal experience, there are still a few jagged rocks left in the stream. Audio quality, for example, could puncture a gaping hole in your Coast Guard Approved PFD (Personal Floatation Device). But not to fear. This live, nationwide, interactive teleconference will provide a boatload of information designed to help you safely navigate any treacherous whitewater you may encounter in your webstream – even if you have yet to get your feet wet. (Excuse me. I'm suffering from a really bad case of metaphoria.)

Streaming Media: Art & Application, is part of the New Media Seminar Series developed by the non-profit Webb Foundation (formerly the ITVA Foundation) who's mission is "to help others understand, apply, and manage the power of electronic communication media in a positive manner." The teleconference will originate from studios in Cupertino, CA and Boston, MA.

As of this writing, panelists will include: AMY JOHNS, Senior Associate

Editor, Wired Magazine; PAUL McCROSSON, Director of Streaming Services, VStream, Inc.; plus representatives from Yahoo/Broadcst.com; Real Networks; Pittard-Sullivan; and Intimate Brands/Victoria's Secret.

Content will include: Marketplace and streaming applications; a technical tutorial on webstream production; costs\$\$\$; limitations of the medium and how they're being addressed; live vs. archived; viewer tracking methods; video fieldtrips to the headquarters of major players; and a live Q&A segment where you get to quiz the panelists.

National sponsors include Convergent Media Systems, Pacific Video Resources – Silicon Valley, The Home Depot, John Hancock Financial Services, Inc. and Knowledge Industry Publications, Inc. Local sponsors will be announced shortly.

The date, once again, is Thursday, April 27th, 2000. The Madison ITVA downlink site will be the University of Wisconsin-Extension's Pyle Center (next to the Old Red Gym), 702 Langdon Street. Registration opens at 5:00 PM with refreshments and hot hors d'ordourves. The teleconference begins at 6:00 PM and ends at 7:45 PM.

Advance registration is a modest \$10.00 for ITVA members, and \$20.00 for non-members. Registration at the door will be \$15.00 and \$25.00. To register, contact Lois Wieland at 831-9242 or e-mail Lois at loiswei@aol.com. You can use a major credit card if you'd like. See your there!

(*Come to think of it, Wisconsin is a *trance-like state*. But that's another article.)

Short Circuits (continued)

members in February, the March issue of the SBE SIGNAL or the SBE Web site, www.sbe.org.

SBE INTRODUCES CERTIFIED BROADCAST NETWORKING TECHNOLOGIST

SBE has rolled out a new certification program designed to respond to the convergence of the broadcast and information technology fields. Applications are now being accepted to take an exam to become a SBE Certified Broadcast Network Technologist. Terry Baun, CPBE, SBE National Certification Chairman, explains that the new certification level will delve into networks as much as possible without becoming specific to any vendor. Topics covered by the exams will include the basics of broadcast local area network installation, recognizing what a hub is, knowing what the different wire categories do and understanding the basic layers of network protocol common to all systems.

ENNES WORKSHOPS SET FOR ST. LOUIS, MO

The Ennes Educational Foundation Trust, in cooperation with the Society of Broadcast Engineers, will present a one-day Ennes Workshop in St. Louis, MO on Saturday, June 17. The Workshop will be held in conjunction with the Missouri Broadcasters Association summer conference. The Workshop will be held at the Adam's Mark Hotel in St. Louis' downtown, just across the street from the famous arch. Register through the Missouri Broadcasters Association by calling (573) 636-6692. Cost is \$35 for members of SBE and the MBA and \$45 for non-members. Registration includes box lunch and breaks.

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 or send them to:

SBE Chapter 24 Newsletter
2029 Greenway Cross #11
Madison, WI 53713-3000

 **FCC Rulemakings**

Compiled By Tom Smith

FINAL RULEMAKING

**MM Docket No. 97-247; FCC 99-362
Fees for Ancillary or
Supplementary Use of Digital
Television Spectrum**

The FCC rejected petitions from the National Association of Broadcasters and the Association for Maximum Service Television to reduce the fee that broadcasters would have to pay to the government for using their DTV spectrum for subscription services. Congress ordered the FCC to charge broadcasters a fee for use of the digital spectrum when used for subscription services. This fee was to make up for lost revenue that the government could have made, if the spectrum was auctioned. The NAB and the AMST asked that the fee be lowered from five percent to two percent. Two arguments were made. The first was that the fee was too high for an unproven technology and the second was that the fee should be reduced because recent auctions had lower than expected outcomes. If the auction prices were decreasing the petitioners argued the fee should be lowered. The FCC rejected both arguments.

In a second part of the notice, the FCC rejected a petition from the United Church of Christ, the Benton Foundation, Center for Media Education, the Civil Rights Forum and the Media Access Project that home shopping and infomercials and direct marketing services be subject to the fee. The FCC stated that because these were allowed on the existing commercial TV services, they were not subject to the fee. The FCC considers them a form of

commercial advertisement.

This notice became effective on January 15, 2000 and was published in the FEDERAL REGISTER on February 10, 2000 on pages 6544-6548. The FCC adopted the notice on November 19, 1999 and released it on November 24, 1999.

PROPOSED RULEMAKING

DA 00-222; Docket No. 99-81; RM-9328 Authorization of 2 GHz Mobil Satellite Service Systems

The FCC has sought supplemental comments on four methods of awarding licenses in the 1990-2025 / 2165-2200 Mhz bands. There are currently nine applicants seeking licenses in these bands.

The four methods proposed include awarding each applicant 2.5 Mhz in uplink and downlink spectrum, allowing the nine applicants to negotiate or coordinate the band themselves, the FCC allocating spectrum as a function of transmission system used, and finally using auctions, if the other methods do not work.

While not stated in the notice, the FCC seems to be trying to avoid burdening the licenses with auction payments in light of the bankruptcy of the Iridium system. Some of this spectrum is currently in use for TV remote pick-up.

This notice was published in the FEDERAL REGISTER on February 11, 2000 with comments due on February 17, 2000.

From the FEDERAL REGISTER (www.access.gpo.gov)

**CHAPTER 24
SUSTAINING
MEMBERS**

RECENT RENEWAL:

Teleport Minnesota

**THANKS TO ALL OUR
SUSTAINING MEMBERS:**

- Alcatel USA
- Alpha Video
- Belden Wire and Cable CTI
- Clark Wire and Cable
- Harris Corporation
- maney-logic
- National Tower Service
- Norlight Telecommunications
- Panasonic Broadcast
- Pinnacle Systems
- Richardson Electronics
- Roscor Wisconsin
- Scharch Electronics
- Sony Broadcast
- Tektronix
- Token Creek Productions
- Video Images
- WISC-TV 3
- WKOW-TV 27
- WMSN-TV 47
- WMTV-TV 15

GROUP

NETWORK SERVICES
Mark Durenberger
General Manager 90 South 11th Street
Minneapolis, MN 55403

Phone 612 330.2433
Fax 612 330.9020
Cellular 612 840.6665

CBS Corporation


CLARK
WIRE & CABLE
1355 ARMOUR BOULEVARD
MUNDELEIN, IL 60060-4401
(800) CABLE-IT - (847) 949-9944
FAX: (847) 949-9595
E-MAIL: SALES@CLARKWC.COM
WWW.CLARKWC.COM


Tom Sibenaller
Sales Representative
ROSCOR
Roscor Wisconsin
W6428 Schilling Road
Onalaska, WI 54650
phone: 608-784-6702
fax: 608-785-0505
e-mail: tsibenaller@roscor.com


WISC-TV
MADISON
3



**SBE
NATIONAL**



**Society of Broadcast
Engineers, Inc.**
8445 Keystone Crossing
Suite 140
Indianapolis, IN 46240



Office (317) 253-1640
Fax (317) 253-0418
Job Line (317) 253-0474
<http://www.sbe.org>

Token Creek
PRODUCTIONS
MOBILE VIDEO

John Salzwedel
3893 Terrace Circle DeForest, Wisconsin 53532
Office: (608) 238-7575 Fax: (608) 238-4955
Web Page: www.tokencreek.com E-Mail: tcp@itits.com

Milwaukee
Madison
Chicago
Indianapolis

**VIDEO
IMAGES**

Video Images, Inc.
2137 S. Stoughton Road • Madison, WI 53716
Phone: (608) 221-8888 • FAX: (608) 221-9252
Internet: <http://www.videoimages.com/>

Jon Gedymin *Regional Sales Manager Broadcast Video*



617 Lake Road
Oconomowoc, WI 53066
Tel 800.477.6111 ext 2263
Fax 414.569.0966
jgedymin@pinnaclesys.com

Corporate Office
280 N. Bernardo Avenue
Mountain View, CA 94043
Tel 650.526.1600
Fax 650.526.1601



Becky Hilborn
*Broadcast Sales
Specialist*

Electron Device Group
40W267 Keslinger Road
PO Box 393
LaFox, IL 60147-0393

*Your Tube and Broadcast
Component Source*

Phone: (630) 208-2372
Fax: (630) 208-2450
E-Mail: becky@rell.com

• www.tubes-r-us.com • 800-348-5580 •



Belden Wire & Cable Company
4218 South Regal Manor Court
New Berlin, Wisconsin 53151

Phone: 414 827 0270
Facsimile: 414 827 0374
Phone Mail: 800 241 7564
Box 2611

Jan Reesman
Sales Representative <http://www.belden.com>



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



SBE Chapter 24 Newsletter
2029 Greenway Cross #11
Madison, WI 53713-3000

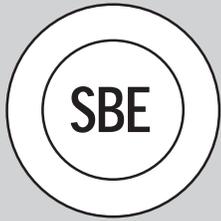


FIRST CLASS MAIL

Newsletter edited on Pagemaker 5.0 by: Mike Norton
Contributors this month: Lloyd Berg, Neil McLain, John Rustad, Tom Smith, and Tom Weeden.
Thanks to Leonard Charles for his work on the Chapter 24 WWW page.

© 2000 by SBE Chapter 24, Inc. Views expressed herein do not necessarily reflect the official positions of the Society, its officers, or its members. SBE Chapter 24, Inc. regrets, but is not liable for, any omissions or errors. The Chapter 24 Newsletter is published twelve times per year. Other SBE Chapters are permitted to use excerpts if attributed to the original author, sources, and SBE Chapter 24.

MARCH MEETING and PROGRAM



**Society of Broadcast Engineers
CHAPTER 24 MADISON, WISCONSIN
Tuesday, March 21, 2000**

Madison Radio Group Studio Tour

This month's program will consist of a tour of the Madison Radio Group facility, located at 2651 S. Fish Hatchery Road. Madison Radio Group Director of Engineering Doug Campbell will give us a chance to see how the WIBA-AM/FM, WMAD, WMLI, WTSO, and WZEE studios all share a common location.

Dutch Treat Dinner at 5:30pm

Meeting at 7:00pm

**at Babes Bar & Grill
5614 Schroeder Road**

Program at 7:30pm

**at Madison Radio Group
2651 South Fish Hatchery Road**

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

2000 UPCOMING MEETING/PROGRAM DATES:

Day	Date	Program
Wednesday	April 26	NAB Review and Elections
Thursday	May 25	Shortwave Radio

Program Committee:	Kerry Maki 833-0047	Denise Maney 277-8001	Steve Zimmerman 274-1234	Mark Croom 271-1025	Steve Paugh 277-5139
--------------------	------------------------	--------------------------	-----------------------------	------------------------	-------------------------