Anniversary Issue

Chapter 24
Madison, Wisconsin

Society of Broadcast Engineers *April 1994*

FIBER OPTIC OSP

PART 4

LAND-ACCESS RIGHTS FOR FIBER OPTIC OSP

by Neal McLain
Communication Technologies, Inc.

This is the forth in a series of articles about Fiber Optic Outside Plant. This article will be devoted to the process of getting permission from landowners to cross their land with a fiber-optic cable.

Most of the information presented in this article is equally applicable either to overhead or underground facilities.

THE LEGAL OPTIONS

Permission to install and maintain a fiber-optic facility on land owned by another party must be obtained from that party. There are several optional ways to obtain permission; in decreasing order of permanence and enforceability, they are: purchase, easement, formal permit, and informal permit.

PURCHASE

In theory at least, it would be possible to purchase the land outright. Under this scenario, the owner would hold the right to build and maintain the facility forever. The only restrictions would be those imposed by government through its zoning and taxing powers.

As a practical matter, this is a highly unlikely scenario: at best, it would be horrendously expensive, and in most cases, virtually impossible.

Nevertheless, there are some interesting cases where fiber-network owners actually do own (or once owned) the underlying land:

Continued on page 4

IN THIS ISSUE

APRIL MEETING

Tuesday, April 26

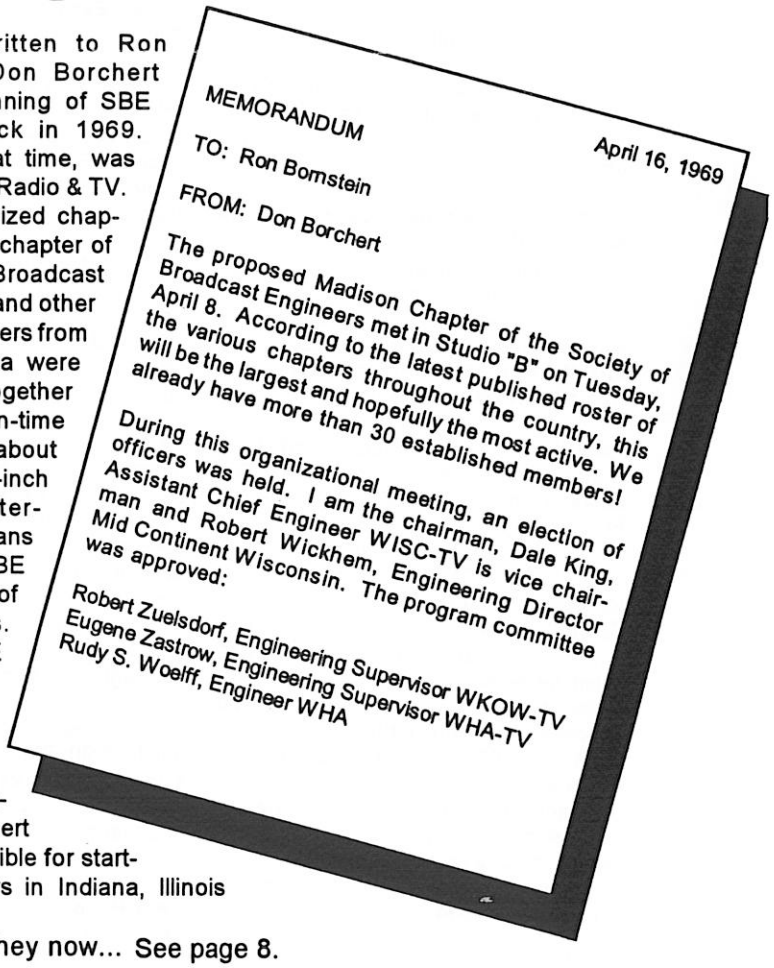
DINNER: Shakey's Buffet
714 S. Gammon Road
(across form Woodman's)

MEETING
(7:00 p.m.)
and
PROGRAM (7:30 p.m.)
at WISC-TV
7025 Raymond Road

"Satellite on Wheels"
presented by Leonard Charles, WISC-TV

25 years!

A memo written to Ron Bornstein by Don Borchert marks the beginning of SBE Chapter 24 back in 1969. Bornstein, at that time, was Director of WHA Radio & TV. The newly organized chapter was the 24th chapter of the Society of Broadcast Engineers. Don and other broadcast engineers from the Madison area were already getting together monthly for noon-time meetings to talk about such things as 2-inch quad tape interchangeability. Plans for starting a SBE chapter grew out of these meetings. Later the SBE meetings were moved to evenings to allow for more staff engineers to attend. Don Borchert was also responsible for starting SBE chapters in Indiana, Illinois and Iowa.



MEMORANDUM

April 16, 1969

TO: Ron Bornstein

FROM: Don Borchert

The proposed Madison Chapter of the Society of Broadcast Engineers met in Studio "B" on Tuesday, April 8. According to the latest published roster of the various chapters throughout the country, this will be the largest and hopefully the most active. We already have more than 30 established members!

During this organizational meeting, an election of officers was held. I am the chairman, Dale King, Assistant Chief Engineer WISC-TV is vice chairman and Robert Wickhem, Engineering Director Mid Continent Wisconsin. The program committee was approved:

Robert Zuelsdorf, Engineering Supervisor WKOW-TV
Eugene Zastrow, Engineering Supervisor WHA-TV
Rudy S. Woelff, Engineer WHA

Where are they now... See page 8.

Notes form SBE Membership Meeting at NAB'94

by Paul Stoffel

● SBE has drafted comments regarding the FCC Docket 93-62 on Radiation Hazard. The comments, to be filed on April 25, are now circulating amongst all the other SBE directors and officers.

● SBE is closely watching a renewed threat by TRW, Inc.'s filing of a petition for rulemaking that proposes spectrum use between 1,970 and 2,010 MHz. There has not been a FCC Rulemaking number assigned. (SBE has previously won battles when Dockets 93-14 and 92-9 threatened the 2-gig ENG band.) The TRW petition does NOT acknowledge the existence of the 2 GHz Broadcast Auxiliary band.

● SBE has filed extensive comments and reply comments to Engineering Technology Docket 93-59 which proposes to assign high-powered wind profiler radar to 449.0 MHz, only 1 MHz below the 450 Mhz Broadcast Auxiliary RPU band.

● SBE filed comments on the proposed new EBS System, the FM peak modulation docket 93-225, and the proposed revision to Private Radio Bureau Form 574, Application for Radio Station License under 47 CFR Parts 74, 90 and 95.

● SBE is assembling maps of each state depicting every SBE chapter's frequency coordinator region by counties. When the map project is complete, hopefully by the SBE 1994 Fall Convention, copies will be given to all frequency coordinators, the FCC, and to Broadcast Auxiliary Radio Services in Gettysburg.

● SBE officially launched the entry level Radio Station Operator Course. The course is intended to replace the former FCC Radiotelephone Third Class Operator License with the Broadcast Endorsement. For a $35 fee, the SBE Radio Operators Handbook, written by John Barcroft, includes an examination request form that the purchaser can mail to SBE when he or she is ready to take a 50-question examination. Individuals who successfully complete the course will receive a certificate as a SBE Certified Radio Station Operator. Certification expires after five years and can be renewed by retaking the course and exam. SBE membership is not required.

A Television station operator course is being developed.

● SBE's membership drive continues. The campaign, "One New Member," includes people who were SBE members at one time and have not renewed. All SBE members should have received membership drive information in the mail.

● SBE considers the idea of more national teleconferences a useful communication tool. The National is open to doing more teleconferences if chapters are interested. Local chapters would be responsible for all aspects of the teleconference. Should a future teleconference's format dictate a need, the National would be available for answering questions. The National doesn't want to control it. Nor does the National want to turn a teleconference into a propaganda program. Future video teleconferences will allow for more interaction with teleconference viewers.

● SBE has finished the SBE CHAPTER MANUAL. The Manual provides many answers to members and prospective members' questions. Packaged in a three-ring binder, the Manual can be easily updated and is full of information about SBE's organization, structure, certification, frequency coordination, conventions, scholarship fund, and examples of various forms. Each chapter chair will receive a Chapter Manual.

● SBE continues to expand its relationship with other industries and organizations such as AES and SMPTE. Terry Baun, SBE Industry Relations Committee Chair, said, "A lot of other (organizations) are really very much in the same situation we are." Terry also talked about our need to be part of the "super highway" and remarked that the NAB convention is changing. "The number of registrants for MultiMedia World is nearly equaling NAB's and, in the future, MultiMedia World is sure to attract more registrants than NAB."

● SBE's International Committee continues to develop alliances with other international organizations. Sandy Sandberg, committee chair, said, "The SBE is not the mother organization. The SBE is just another organization where there is a free flow of information and techniques with support from all sides."

● Beginning April 18, the SBE National Office will stay open longer to serve our membership. Office hours will be 8:30 am to 6:30 PM, EST, Monday through Friday. SBE is expanding service hours without additional expense. As a reminder, Indianapolis never changes to Daylight Savings Time.

● SBE, for the second consecutive year, finished 1993 in the black by approximately $24,000.

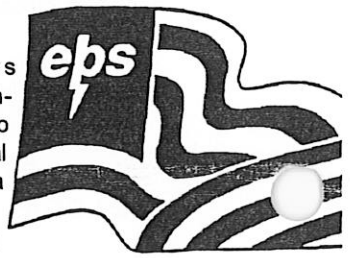
● National SBE Sustaining Membership seeks support from the general membership. SBE members could solicit new National Sustaining Members within their own companies or companies with whom you come in contact with.

● WORLD MEDIA EXPO 1994 in L.A. marks SBE's 30th anniversary.

● SBE Job Line is updated every Friday and contains 30 to 40 job listings from around the country. A recorded message is available by calling 317-253-0474. The job line is also on the SBE BBS at 317-253-7555. Job listings can be submitted to the job line for free. During the Chapter chair meeting, there was a question from an SBE member about the possibility of making the job line telephone number an 800 number.

*(Additional information from **THE SIGNAL** and **THE BROADCAST NEWSLETTER**, Chapter 28, Milwaukee)*

EBS



Broadcasters throughout Wisconsin were requested to participate in a Local Operational Area EBS Test during the week of April 11 through April 15.

Each of the seven EBS Operational Areas in Wisconsin ran an "unannounced time" EBS Test that was conducted by the Area's EBS Chairman and CPCS-1.

The South Wisconsin Operational Area's EBS test ran on April 13 at 1:34 PM, with Ken Sweet, WIBA, as Chair.

It is hoped by Gary Timm, Chairman of the WI State Emergency Communications Committee, that this type of test is more realistic than a scheduled-time statewide EBS test.

Timm and Alan Wohlferd, Director of Communications & Warning, WI Division of Emergency Government, are gathering information from the Test to determine EBS receiver reception problems within an Operational Area.

All radio and television stations, whether or not they participated in the Local EBS Test, are asked to return a Reply Sheet with your opinions on the Test and a notation of any monitoring problems.

The Reply Sheet should be mailed to: Gary Timm, WTMJ/WKTI, PO Box 693, Milwaukee, WI 53201-0693.

March Meeting Minutes

Chapter 24 of the Society of Broadcast Engineers met on Monday, March 28, 1994 at WHA-TV (Wisconsin Public Television) in Madison. Total attendance was 17, all were SBE members, and 11 were certified.

Chair Leonard Charles called the meeting to order at 7:05 p.m. February Minutes were approved as printed in the newsletter.

Treasurer and Newsletter Editor Paul Stoffel reported a checking account balance. The newsletter deadline is April 10th, with the folding session set for April 14th, 1994.

Membership Chair Leonard Charles reported a total membership of 68. Newsletter copies sent out total 171, of which 73 are complimentary.

Sustaining Membership Chair Stan Scharch reported membership is holding steady at 24.

Program Chair Steve Zimmermann said Roscor will present next month's program on desktop animation. The May program will be at the UW Medical Clinic.

Special Events Chair Kevin Ruppert reminded everyone of the breakfast meeting Tuesday, April 12th, from 7 to 9 am at Denny's, across for West Towne. The program will be measurement techniques for evaluating codec performance, presented by Richard Schaphorst of Delta Information Systems. If you are interested in attending please contact Kevin at 277-5151.

Certification Chair Jim Hermanson was unable to attend, but he did want to mention the National SBE has begun two new levels of certification. These are designed to fill the void created by the FCC abandoning the Third Class License. The new certifications are: Radio Operator Certification; and a Television Operator Certification. SBE membership is not a requirement to obtain these certifications. The SBE is offering a handbook for $35, which includes in the price the cost of taking the exam. These certifications must be renewed every five years.

Frequency Coordinator Tom Smith had a wireless mic request from NBC News.

In news from the National Office, Chair Leonard Charles indicated the post office box for the National SBE Office is no longer valid, you must now use the street address:

SBE
8445 Keystone Crossing
Suite 140
Indianapolis, IN 46240.

The National is holding a new membership contest through May 31st. The grand prize is a trip for two to the SBE Engineering Conference in Los Angeles this October.

New Business: Nomination deadline for Chapter 24 Officers is April 26th. Elections will be held May 25th.

Old Business: The University of Wisconsin-Platteville, will be holding their second annual television Engineering Symposium, "The Future of Broadcast Entities," on April 13, 1994.

The meeting was adjourned at 7:30 PM. At this time Program Chair Steve Zimmerman initiated a roundtable discussion on the NAB convention just completed. Tours of WHA-TV production studios and Wisconsin Public Radio control rooms were given. Thanks goes to Lonnie Cooks from radio and Tom Smith and Paul Stoffel from television.

Secretary, Kerry Maki

Chapter elections are scheduled to take place at the May 25th meeting.

An election insert, along with a ballot, will be included in the May issue of the Chp. 24 Newsletter.

Local Legals

Compiled by Tom Smith

Proposed Sale

WIBU-AM Poynette 1240 KHz at 1 Kw, purchased from WIBU Inc. (Harry D. Jacobs, President) by Radio Hill Broadcasting (Stan C. Johnson, President) for $217,500. Neither group has any other broadcast interests.

(from BROADCASTING&CABLE magazine)

Fiber OSP

Continued from page 1

● Wisconsin Energy (the holding company which owns WEPCO) owns several old railroad rights-of-way in the Milwaukee area. The railroads themselves are long gone, but the land now serves as right-of-way for electric transmission lines and fiber-optic communications links used to control electric transmission facilities.

● Williams Telecommunications, or WilTel, owns a nationwide fiber-optic network on land owned by its corporate parent, Williams Pipeline. Although this land was originally acquired as right-of-way for petroleum transmission lines, Williams has discovered that abandoned pipelines are ideal places for fiber-optic cables. The backbone of WilTel's network is clearly visible from the air: an unbroken strip of undeveloped land stretching from Tulsa to Chicago, with repeater stations co-located with pumping stations every 15 to 30 miles.

● Southern Pacific Rail Corporation (SPR) once built a fiber network called Sprint (as in SPRint) along its railway right-of-way. SPR subsequently sold the network, but we still know it today as Sprint.

EASEMENTS

An easement is a legal construct under which one party (the "grantee") acquires a specific interest in land owned by another (the "grantor"). The grantor still retains actual ownership; the grantee acquires irrevocable rights which may even supersede the grantor's rights.

A description of the land covered by the easement, and any other special conditions (specific rights granted; the expiration date, if any; financial considerations, etc.), are spelled out in a legal document. To be enforceable, this document must be recorded. In Wisconsin, it is recorded with the Register of Deeds in the county where the land is located; other states have similar recording procedures, usually at the county level.

The key elements of an easement: it is irrevocable, and it "runs with the land". Once an easement has been signed and recorded, the grantor cannot change his mind and revoke the easement. If the grantor sells the land, the grantee's rights are binding on the new owner.

A typical situation involving the use easements for electric power and communications facilities occurs when land is subdivided for development. Under Wisconsin law, any subdivision involving five or more parcels must be subdivided by a recorded plat. Before a plat is accepted for recording, it must pass through an extensive "plat review" process. As an automatic part of this process, utility companies are given the opportunity to claim easements; these easements are then shown on the plat map. Electric power and telephone utilities usually claim easements along rear lot lines, as shown in Fig. 1.

Note that these easements are granted to the utility companies before individual lots are sold for development. Thus, the right of utility companies to occupy these easements is binding on subsequent property owners forever.

Easements shown on plat maps are usually designated only as "utility easements"; specific companies are rarely named as grantees. Thus, any electric power or telephone company, as a legally-defined utility company, has a clear right to use them. Cable television companies (which are not utility companies under Wisconsin law) have a federal right (under the Cable Communications Policy Act of 1984) to use any "compatible" easement; however, this provision has been the subject of much litigation, and the rights of cable companies are still far from clear. Any entity other than a utility company or a cable television company does not have any legal right to use an existing easement; accordingly, such an entity would have to negotiate a separate easement with each individual landowner.

Such negotiations might be extremely difficult. Even if most landowners are cooperative, just one landowner, by demanding an unreasonable financial consideration, can block access to an entire pole line.

A case in point is evident in Fitchburg, where MRC's OPGW cable jumps off the MGE transmission line and follows local streets (Syene Road; Irish Lane) for a mile or so to bypass the southeast quarter of Section 14.

FORMAL PERMITS

Like an easement, a formal permit is a legal construct under which one party (the "grantee") acquires a specific interest in land owned by another (the "grantor"). The grantor still retains actual ownership; the grantee acquires certain limited revocable rights.

A description of the land covered by the permit, along with any other conditions, is spelled out in a legal document. Permits may be recorded, although most permits are not.

The key elements of a permit: it is revocable, and it generally does not run with the land. If the grantor of a permit changes his mind, he can revoke the permit. If the grantor sells the land, the grantee's rights are not binding on the new owner unless a specific covenant is included in the sales agreement.

A typical situation involving the use of permits for electric power and communications facilities occurs when the facilities are placed within the rights-of-way of public streets. Except in extremely rare circumstances, government bodies simply do not grant easements: any entity desiring to install any kind of facility within the right-of-way must obtain a permit, and must accept the fact that the government retains the right to revoke it.

The right-of-way includes the entire strip of land occupied by a roadway, including adjacent lands occupied by shoulders, ditches, and sidewalks. The typical right-of-way is 66 feet (one "chain") wide, usually (but not always) centered on the centerline of the roadway (see Fig. 1). In urbanized areas, the right-of-way boundary usually falls a few inches outside the outer edge of the sidewalk; in rural areas, fences frequently indicate the approximate boundary.

Government bodies retain broad powers when issuing permits. Most permits specify how and where the facilities are to be installed within the right-of-way, and force the grantee to agree to relocate the facilities, at the grantee's expense, in the future. Relocating an existing facility to accommodate a street-widening project may require rebuilding the entire facility virtually from scratch.

As a practical matter, these are not unacceptable conditions. A permit issued by a government agency is virtually as permanent as an easement on private land. Governments do not revoke permits except in exceptional circumstances, and they aren't likely to sell their lands. In any case, getting one permit from government is far easier than getting a string of contiguous easements from private landowners.

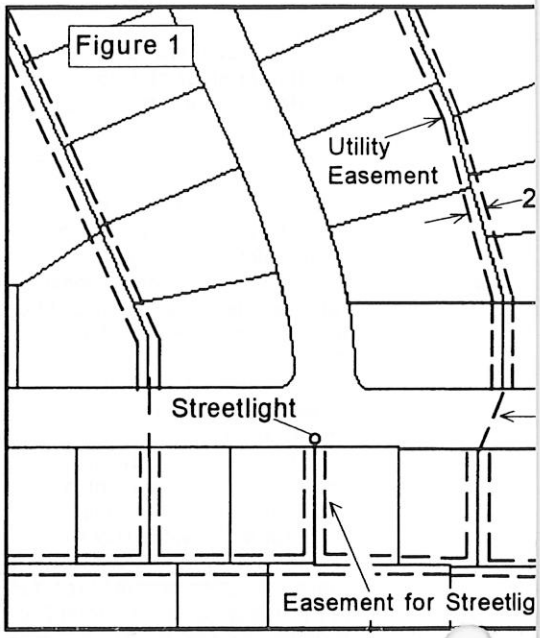


Figure 1: A typical residential subdivision plat map. The 66 street, the sidewalks, and the "terrace" strips between the side natural gas, storm sewer, and sanitary sewer facilities. The provide space for electric power, telephone, and cable televi

Permits are issued at three levels of government:

● At the state level, the Wisconsin Department of Transportation issues permits for facilities on state-owned highway right-of-way. State right-of-way includes land occupied by officially-designated state and federal highways located outside of incorporated municipalities; frequently, but not always, it also includes the right-of-way within municipalities.

The state permitting process is exceedingly detailed. The requirements are spelled out in a 72-page publication titled "The Policy for the Accommodation of Utilities within Highway Right-of-Way".

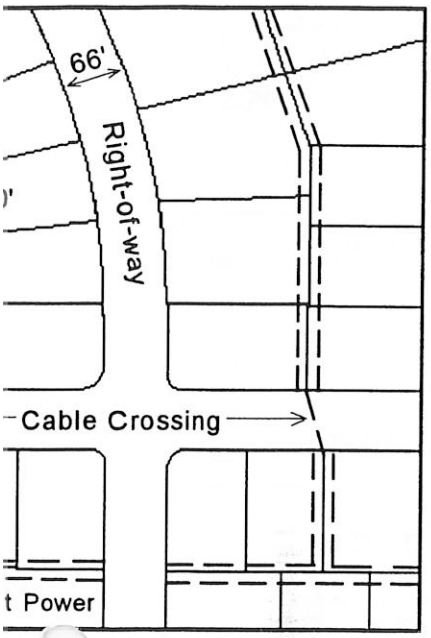
The word "utilities", as defined in this publication, includes any entity providing any form of communications services, including "privately-owned facilities". This definition is sufficiently broad to include privately-owned fiber-optic networks.

● At the county level, transportation departments issue permits for facilities on county-owned highway right-of-way. County right-of-way includes land occupied by officially-designated county highways located outside of incorporated municipalities; in most cases, it also includes the right-of-way within municipalities.

County permitting processes vary from county to county, but most are fairly detailed. Counties generally require adherence to the state accommodation policy.

● At the local level, municipalities issue permits for facilities on municipally-owned right-of-way. Municipal right-of-way includes land occupied by all local public streets not designated as state or county highways.

Municipal permitting processes vary widely. In larger cities, such as Madison, the process is administered by a Department of Transportation. In smaller cities, permit administration often falls to some overworked employee who serves as public works director, city engineer, building inspector, and copier repairman all rolled into one. In townships, the process is often quite arcane, requiring the permission of a town board which rarely meets more often than the once-a-month required by state law.



oot right-of-way includes the paved portion of the alk and the curb; it also provides space for water, 0-foot utility easements along the rear lot lines on distribution facilities.

RAILROAD LEASES

A railroad lease is a special case of the formal permit, in which the grantor is a railroad company. Like any other formal permit, the conditions of the lease are spelled out in a legal document, which may or may not be recorded.

For a communications-network designer, railroads present a special opportunity: long stretches of unbroken right-of-way. Moreover, railroad right-of-way has a significant advantage over highway right-of-way: long-term stability. A communications facility installed on a highway is in constant danger of damage, whether it's overhead (drunk drivers) or underground (backhoe operators). Highways themselves are subject to frequent reconstruction and widening work, which may require relocating existing facilities. By contrast, railroad rights-of-way have been stable for a century, and are likely to remain so in the future.

But railroads also present a special problem: cost. Railroad companies are keenly aware of the value of their right-of-way, and they operate in a virtually unregulated market. The rental for a single crossing frequently exceeds $200 a year, or about $2.00 per foot per year.

Long-distance interexchange carriers (primarily AT&T and Sprint) use railroad right-of-way extensively, in spite of the cost (although, presumably, they have the clout to negotiate lower rentals). But any company that doesn't need long stretches of right-of-way generally tries to avoid railroads altogether. Many cable television systems are actually constructed as two separate systems connected by a single railroad crossing.

Fortunately, the market isn't completely unregulated either: under Wisconsin law, a lease is not required for a railroad crossing within a highway right-of-way if the highway right-of-way actually includes the crossing (see Fig. 2). It may take some research to determine the actual locations of the right-of-way boundaries, but the results can be well worth the effort.

INFORMAL PERMITS

Informal permits may be verbal or written. They are never recorded, and they have no legal standing whatever.

Nevertheless, they are sometimes very useful. A situation occasionally arises in telephone and cable television work where it's necessary to cross three or four lots to provide service to a neighbor down the block. In such situations, easements are out of the question: the cost of the legal work alone would exceed the cost of the entire construction project.

Yet, it's still necessary contact the owners of the intervening lots to obtain some kind of permission. Sometimes a verbal request is sufficient: "We're running a wire down to Mrs. Jones' house, and we'll be in your backyard for a few minutes, if that's okay with you".

Alternatively, it may be desirable to contact each owner to obtain a signature on a simple one-page permission form. In my experience, most owners are willing to sign such a form once the reasons are explained. The few owners who refuse to sign are likely to be neighborhood troublemakers anyway; asking permission is a good way to identify them while the project is still in the planning stage. As a former colleague once put it, "it smokes the bastards out of the woodwork".

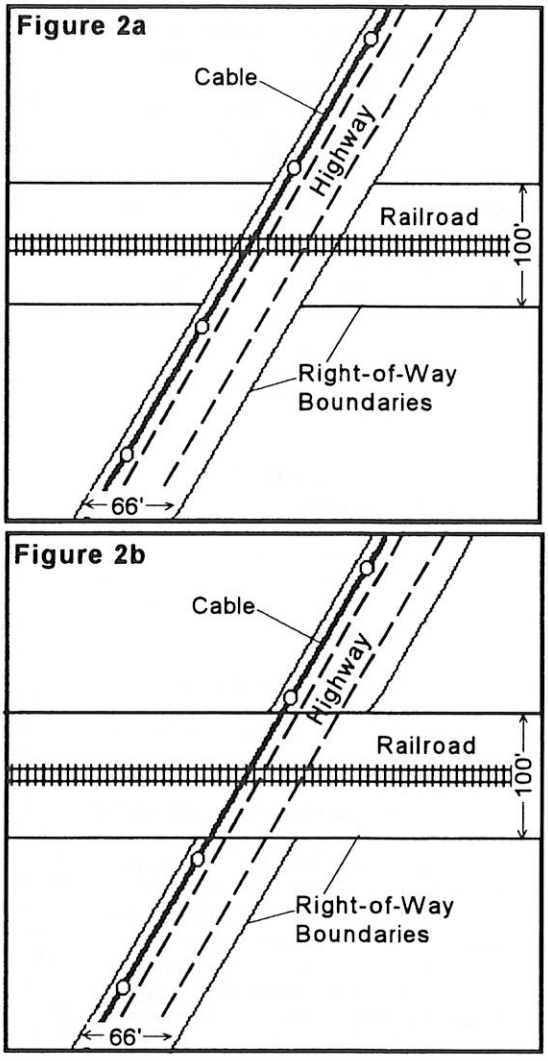
WHAT'S BEST FOR FIBER?

We've discussed four legal ways to obtain permission to install and maintain a cable facility on land owned by other parties: purchase, easement, formal permit, and informal permit. Of these four, which is the best choice for a fiber-optic facility owned by a private entity?

It's safe to rule out two choices immediately: purchase and informal permit. Purchasing a strip of land for a fiber facility would be prohibitively expensive, and probably would not even be possible. At the other end of the scale, informal permits are legally worthless.

That leaves two choices: formal permits for public right-of-way (and possibly railroads, if there's no way to avoid them), and easements for private property. Of these two, obtaining permits is definitely easier, but it may be necessary to obtain private easements in some circumstances.

An essential step in the permitting process is the preparation of a route map. We will deal with route mapping in the next article in this series.



Figures 2a and 2b: Railroad crossings at highways. Both of these figures illustrate a communications cable running parallel to a highway at a railroad crossing. Fig. 2a shows the situation where the crossing is part of the highway right-of-way; in this case a lease is not required for the cable. Fig. 2b shows the situation where the crossing is part of the railroad right-of-way; in this case a lease is required for the cable.

Drawings by Troy Eickhoff

FCC RULEMAKINGS

Compiled by Tom Smith

Implementation of Section 9 of the Communications Act; Assessment and Collection of Regulatory Fees for the 1994 Fiscal Year.
MM Docket # 94-19; FCC 94-46

The FCC is seeking comments on the implementation of the regulatory fees from the services that it regulates.

The proposed rules will set where and when the fees are to be paid and their enforcement. They are proposing an installment plan for TV broadcast fees over $12,000, cable over $18,500 and phone companies of $0.5 Million or $0.7 Million depending on type.

The fees will not be changed from what has been previously published, but there is a proposal to require persons holding lifetime restricted radiotelephone and radio operator licenses to pay a one time fee of $105.

Comments were due on April 7 and reply comments are due on April 18, 1994. Published in the FEDERAL REGISTER on March 17, 1994, on pages 12570 to 12578.

Establishing Rules and Policies for "Local Multipoint Distribution Service"
CC Docket # 92-297, FCC 94-12

The FCC issued a second notice of rulemaking in the matter of redesignating the band of frequencies 27.5 - 29.5 Ghz from a point to point service to a point to multi-point service. The commission published a Notice of Rulemaking on January 28, 1993 in the FEDERAL REGISTER. The Rulemaking considers three petitions for the redesignation of the band.

The petitioner's included **Suite 12** and **Video/Phone** which would like to start a wireless video distribution system in this frequency band. Last year a multi-channel FM video system was built to see if a television signal could be delivered to homes using these frequencies. It would operate like the current 2 Ghz Multipoint Distribution Systems with more channels available to the consumer.

The FCC would like the following information: types of services for the band, economic potential, and the short and long term benefits of the proposed services. The FCC would also like to know how to reuse the spectrum as requirements change.

There is a question if the proposed services can share the space with the satellite services now allocated to that band.

The FCC would like to establish a committee to look at these issues and advice them. If a committee is not formed or does not reach a consensus, the FCC will set a date for comments.

This notice was issued on February 14, 1994, and published in the FEDERAL REGISTER on February 17, 1994, pages 7964-7966.

Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation.
ET Docket # 93-63, DA94-161

The FCC has extended the reply period for comments again. The new date to have reply comments in is now April 25, 1994. This notice was published in the FEDERAL REGISTER on February 25, 1994, on page 9171.

Sports Programming Migration
PP Docket # 93-21; FCC 94-65

The FCC has issued a further Notice of Inquiry on the subject of the availability of college sports to local television. The CABLE ACT of 1994 mandates that the FCC inquire on the movement of sports programming to cable and its consequences.

Comments were due on April 11 and reply comments on April 26, 1994. Published in the FEDERAL REGISTER on March 15 on page 11962.

From the FEDERAL REGISTER on March 16, the FCC issued a reminder to all AM stations that "presumptive compliance" expires on June 30, 1994, and they must make annual measurements of their emitted spectra.

(From the FEDERAL REGISTER)

More NOAA Weather Stations

by Tom Smith

● After the deadly Palm Sunday tornadoes in the Southeastern part of the country, Vice President Gore announced an expansion of the NOAA weather radio system. The proposal calls for an additional 100 transmitters.

Besides NOAA, the Federal Emergency Management Agency (FEMA) will use the system for other emergency announcements such as toxic spills. The Agriculture Department will make available low interest loans to communities for construction of some of the stations. The new stations would increase coverage from 75 up to 95 percent of the population. Gore also mentioned the effort to include cable TV in the emergency warning system.

● The NAB has met with the FCC to get a delay in the implementation of the new EBS system. Broadcasters voiced concerns about cost and workability of the proposed systems. The rules were to be issued this spring.

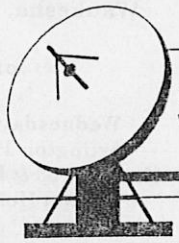
*(Information from **The Wisconsin State Journal** and **Radio World**)*

APRIL MEETING and PROGRAM

Society of Broadcast Engineers
CHAPTER 24 MADISON, WISCONSIN
Tuesday, April 26, 1994

5:30 p.m. Dinner at Shakey's Buffet
714 South Gammon Road
(across from Westgate Mall)

7:00 p.m. Meeting and Program at WISC-TV , 7025 Raymond Road



Satellite on Wheels

Leonard Charles gives us a close-up look at WISC-TV's new satellite uplink truck called NEWSTAR 3.

Also as part of the program, Chuck will demonstrate CAMPLEX, a bi-directional multiplexing system that uses only one 75-ohm coaxial cable to simultaneously send video, audio, camera power and data signals required for live remote camera productions.

Visitors and guests are welcome at all our SBE meetings!

Forward your program ideas to the Program Committee!

1994 MEETING/PROGRAM DATES

Date	Topic	Presenter
May 25, '94Wed.	**Elections**/Advanced Electronics	*UW Sports Medicine*

Program Committee: Mark Croom 271-1150, Kerry Maki 833-0047, Denise Maney 277-8001, Steve Zimmerman 274-1234

What's happening...

WBA/SBE SUMMER ENGINEERING SEMINAR PRELIMINARY PROGRAM

TUESDAY JULY 12, 1994
LANDMARK RESORT, Egg Harbor, Door County, WI

8:00 AM	On-Site **Registration** Table Open
8:30	Seminar Opening, Welcome to participants and introduction of Steering Committee
8:35-9:15	**"Digital Video Developments"** presented by Panasonic
9:20-10:05	**"New Technologies for RF Systems Maintenance"** presented by Broadcast Communications
10:05-10:15	BREAK
10:15-11:00	**"Hard Disk Storage for Radio"** presented by Computer Concepts
11:05-11:50	**"MPEG Video Storage on Hard Disk"** presented by Channelmatic, Inc.
12:00-2:00PM	**SBE REGIONAL LUNCHEON AND MEETING** Seminar Keynote Presentation by Evans Associates "Broadcasting at the Crossroads: The Information Highway"
2:15-3:00	**"Magneto-Optical Disk Storage"** presented by SONY
3:00-3:15	BREAK
3:15-4:00	**"Recent Developments in Transmitter Systems"** presented by Continental Electronics (ART WILLIAMS WILL SUPPLY DETAILS)
4:00	Close of Engineering Seminar
4:30-7:00	**WBA Opening Exhibition and Reception.** An SBE Booth will be staffed by representatives of all area chapters. Volunteers are needed for set-up and booth duty.

Cost is the same as last year—Just $25.00 for the entire seminar, which includes the SBE Lunch and keynote address. For $40.00 you can also attend the exhibits, reception, and evening dinner.

Call 608/255-2600

You're invited!

Grounding, Lightning, and Impulse Suppression

A Technical Seminar by PolyPhaser Corporation

What is Lightning?
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Attend the Seminar of Your Choice:

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Holiday Inn
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Wednesday, May 11th
Arlington Park Hilton
Highway 53 & Euclid Avenue
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Two Seminars Each Day

8:00 AM - Registration and Refreshments
8:30 AM to 12:00 Noon - Seminar Topics

1:00 PM - Registration and Refreshments
1:30 PM to 5:00 PM - Seminar Topics

Electronics Products Inc.
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Technology Expo '94

Tuesday, May 17, 1994
9:00 AM to 4:00 PM

Regency Conference Center
333 Main Street, Green Bay, WI

Audio/Visual, Video & Computer

CAMERA CORNER
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Amateur Radio News

by Tom Weeden, WJ9H

● The FCC has released the results of a telephone interference survey which has just been completed. Thirty-five FCC field offices each picked three random cases of telephone interference on record and then visited the scene. The transmitters included 47 citizens band, 27 amateur, 23 AM broadcast, 10 FM broadcast, and one international broadcast station. On site, the FCC personnel tested 241 different phones, including the commission's own "bulletproof" phones, as well as some commercially available line filters. Some of the findings:

1.) Transmit power did not seem to be a significant factor. In a third of the cases, interference was experienced when power was 10 watts or less.

2.) Filters only reduced interference one-third of the time.

3.) FCC's "bulletproof" phones were immune from the experience on the sites "virtually all the time."

In its release, the Commission said that it hopes that the survey will encourage affected parties "to productively address and resolve this problem," and that "manufacturers can design phones to be interference free."

● In an April 4 press release, the FCC announced that it has relaxed the amateur service rules to enable contemporary message forwarding systems to operate automatically while retaining safeguards to prevent misuse. Currently, the control operator of each station is held individually accountable for each message retransmitted, resulting in unnecessary content review and delays. The Commission said there must be on-going oversight of the system and the control operators of the first forwarding stations are in the best position to provide such oversight. In this rule revision, the FCC will now hold accountable only the licensees of the station originating a message and the licensee of the first station forwarding a message in a high-speed message forwarding system. The Commission believes that these rule changes will enable contemporary high-speed message forwarding systems to operate as their designers intended, while retaining the minimum safeguards necessary to prevent misuse. The effective date of the rules change has not yet been announced.

(From April 1994 ***Badger State Smoke Signals****,* ***QST Magazine****, and packet radio bulletins)*

WANTED Newsletter Editor

It has been two years since I took on the responsibility as editor of the **Chapter 24 Newsletter**. That's 24 issues of editing, desktop publishing and mailing. It has been a wonderful learning experience! Regular columns, such as AMATEUR RADIO, RADIO NEWS, TV NEWS, LOCAL LEGALS, SBE NATIONAL NEWS, FCC RULEMAKINGS, MEETING MINUTES and many other well-written articles, have filled the many pages and helped win awards. I am ready to pass on the baton. Be assured that I will assist the next editor for as long as necessary during the transition.

Paul S.

1994 WBA Engineering Workshop and Regionwide SBE Meeting & Lunch

Tuesday, July 12, 1994
Landmark Resort
Egg Harbor, Door County

Systems In Transition: Broadcasting in the 90's
(See back of insert for details.)

$25.00 Sessions, Lunch and Exhibits.
$40.00 All of the above plus the WBA Banquet at 7:00 p.m..

Program Co-Chairs: Terry Baun, Chris Cain, Art Williams, Mark Berg, Greg Dahl

CHAPTER 24 SUSTAINING MEMBERS

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WKOW-TV 27
WMSN 47
WMTV 15

After 25 years...
Where are they now?

Continued from page 1

Don retired from the University of Wisconsin-Madison in 1993 but continues to do consulting work for the Madison candelabra project and Harley Davidson in Milwaukee.

Ron Bornstein is now Senior vice-president for Administration, UW-Madison.

Dale King, retired from UW-Parkside, lives in Florida. **Eugene Zastrow** is Director and vice-president of the Mount Sutrow Candelabra Project in San Francisco. **Rudy Woelff**, retired from WHA Radio in 1984, lives in Portage. While employed at WKOW-TV, **Robert Wickhem** was Director of Engineering. **Robert Zuelsdorf** is employed as a Research Engineer at Ensemble, Grass Valley, CA.

SBE
SBE Chapter 24 Newsletter
3538 Concord Avenue
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