Infrastructure, regulatory and financial information for the antenna-siting community

ABOVE GROUND LEVEL

agl™

www.agl-mag.com

NOVEMBER 2007

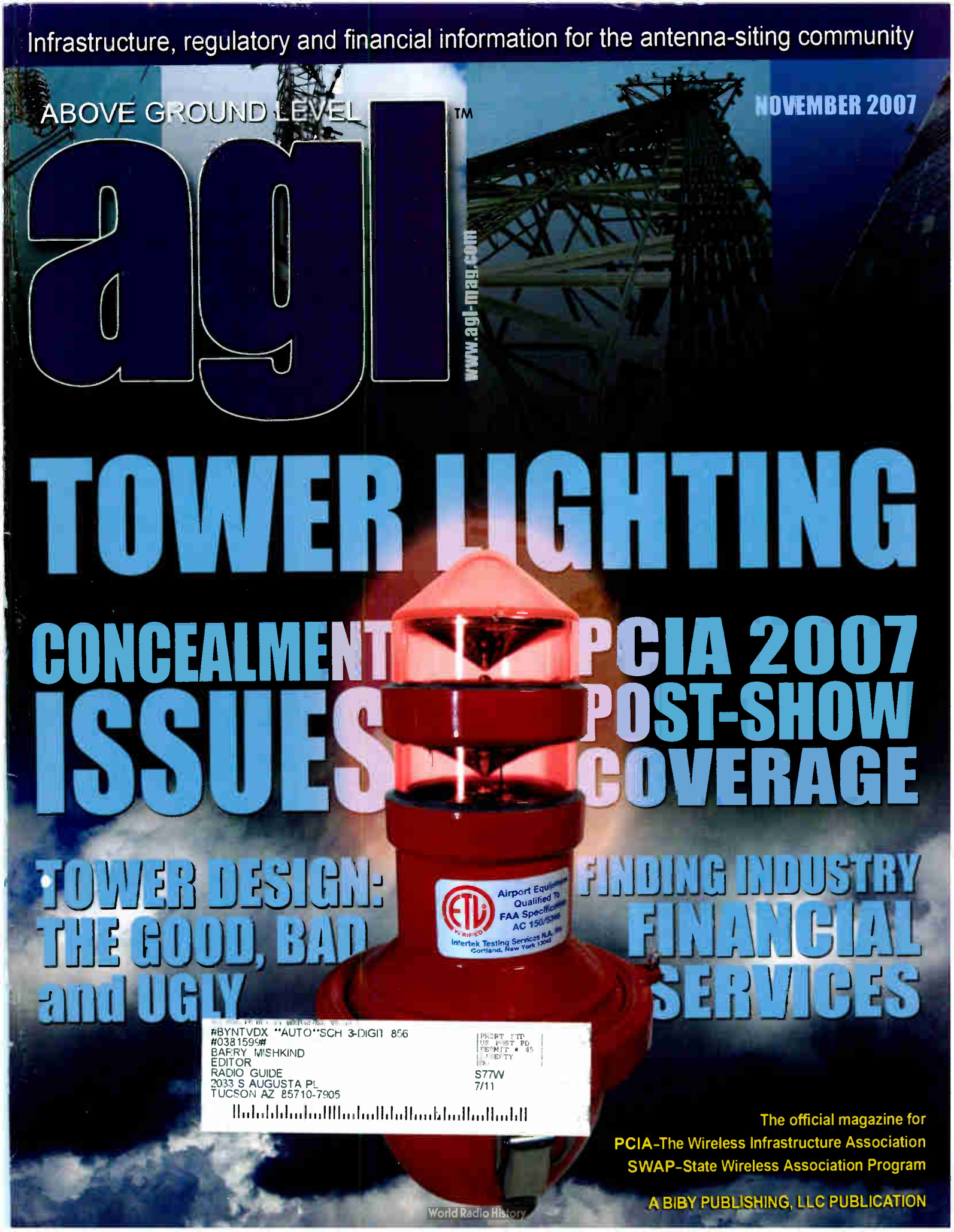
TOWER LIGHTING

CONCEALMENT ISSUES

PCIA 2007 POST-SHOW COVERAGE

TOWER DESIGN: THE GOOD, BAD and UGLY

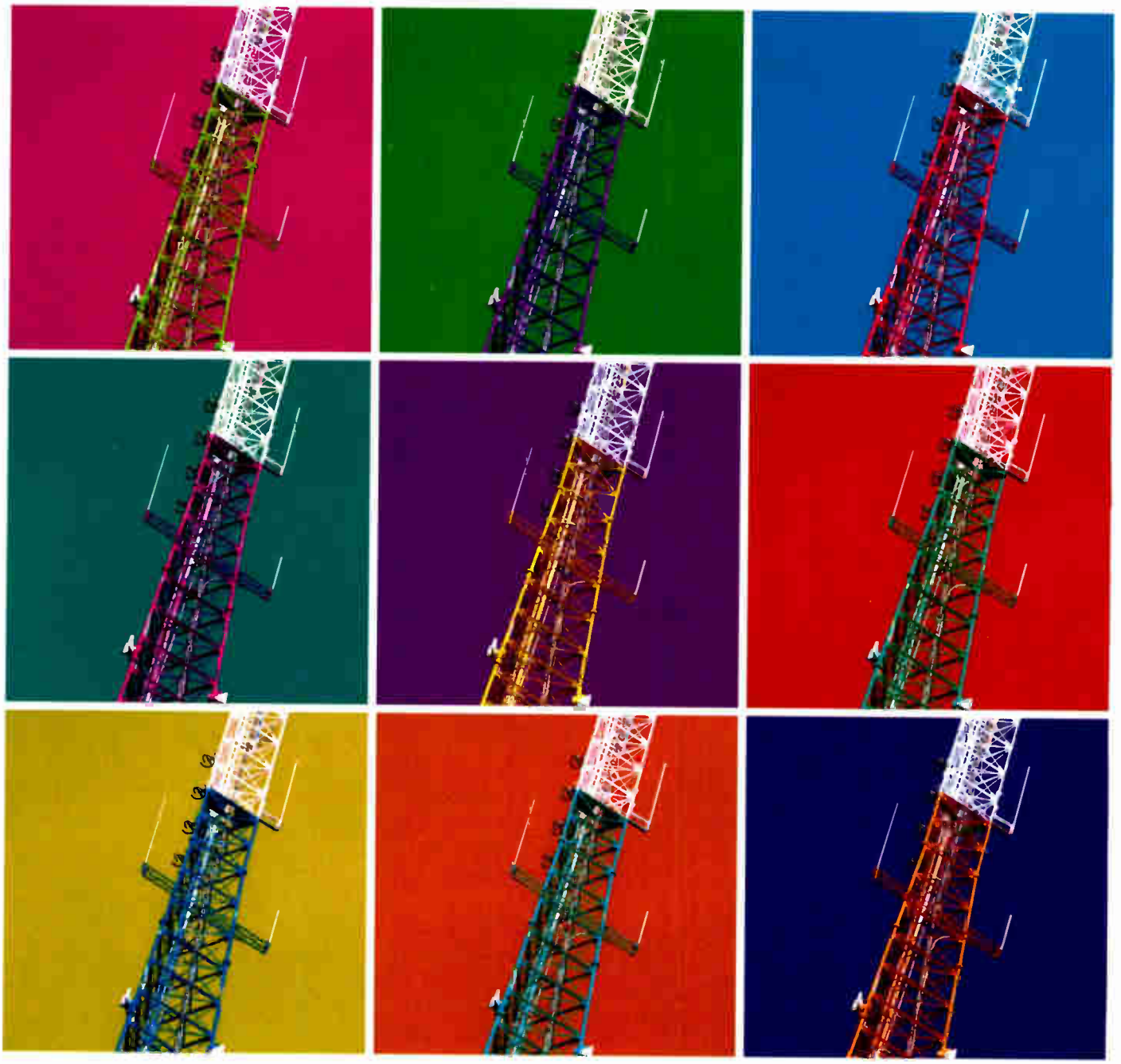
FINDING INDUSTRY FINANCIAL SERVICES



The official magazine for
PCIA-The Wireless Infrastructure Association
SWAP-State Wireless Association Program

A BIBY PUBLISHING, LLC PUBLICATION

WE UNDERSTAND EVERY TOWER OWNER FACES UNIQUE RISKS.



Atlantic Risk Management is a large, independent insurance agency and an expert in protecting tower owners from unexpected risks. We offer complete, competitively priced programs endorsed by PCIA and tailored to suit your specific exposures, including: self-supporting, guyed or monopole towers; support equipment; shelters and fencing; plus general liability, business auto, workers' compensation, umbrella and more.

Find out why we protect more tower owners than any other agency.

Call 866-226-0555, visit *towerinsurance.net* or email David Saul at *dsaul@atlanticrisk.com*.

Atlantic Risk Management
CORPORATION

Endorsed by:
PCIA

THE HARTFORD

Features

18 Better to Make One Phone Call Than to Curse the Darkness
D. A. Keckler
A new, nationwide, toll-free phone number is your route for reporting lighting outages.

22 Make Concealment Work
Sean McLernon
Carriers should make concealment their ally. The best way is to involve concealment experts during the planning phase, but it's not too late in the design and construction phases, either. It's just that costs tend to go up.

26 AGL Financial Directory
A quick reference to services offered in the areas of appraisals, attorneys, business brokers, financial consultants, financial services, insurance, loans, real-estate services and site acquisition.

30 Centerspread: Tower of the Month
November is a time to give thanks, and the AGL staff has been celebrating this month's gal since first laying eyes on her. Standing directly over the TeleCourier Communications offices in Bloomington, Il, the 420-foot miniature 'Eiffel Tower' is a Midwest landmark.
Photography by Kristine McIntosh.

32 Something to Hide
Robert Hunt
Materials for concealing antennas must exhibit proper RF performance.

36 PCIA Show Draws 1,500 to Orlando
Don Bishop
Tower companies, vendors and carriers analyze the antenna-siting industry's future.

40 Tower Design: The Good, Bad & Ugly
Richard P. Biby, P.E.
Comparing standard monopole designs to camouflaged alternatives starts with RF engineering requirements.

Departments

10

on the cover

An aviation-obstruction-marking lighting device calls attention to a new FAA procedure for notifying aviators about tower beacon failures. Being prepared with necessary information ahead of time will streamline your ability to report. See D. A. Keckler's article on page 18.

Photo illustration by Scott Dolash.
LED L810 photo courtesy of Farlight LLC.

AGL (Above Ground Level) is published 11 times a year by Biby Publishing LLC, P.O. Box 284, Waterford, VA 20197, and is mailed free to qualified individuals in the United States of America.
POSTMASTER: Send address change to AGL Circulation Department, P.O. Box 284,

6 Contributors

8 Line of Site

10 Built to Suit
MidAmerica Tower Service becomes the first tower contractor accepted into OSHA safety program.

12 Vertical Assets

14 Risky Business
Failure to provide prompt notice of a claim may mean forfeiture of the protection you bought the policy for in the first place.

16 The Noise Factor
The game is a lot fairer when everybody plays by the rules.

44 SWAP Meet / Meet SWAP
SWAP forms national executive committee; focus on Alabama Wireless Association.

47 Products

48 Backscatter
FCC slightly moderates back-up power Order; Black & Veatch acquires Richard Connor Riley & Associates LLC.

58 Advertisers Index

58 Professional Directory

"COMING THROUGH LOUD AND CLEAR ..."

- Antennas
- Combiners
- Wattmeters
- Duplexers
- Filters
- System Design

FORMER WACOM CUSTOMERS:

Telewave can support Wacom commercial and amateur products. Many Telewave products share a common design heritage with Wacom, and most of our cavity and isolator products are drop-in replacements for Wacom. We can repair, rebuild, and expand most existing Wacom items or systems without a complete change-out.

Telewave, Inc. delivers high performance ... everywhere, everytime.

We bring 33 years of product engineering and system design expertise to the table for every customer, large or small.

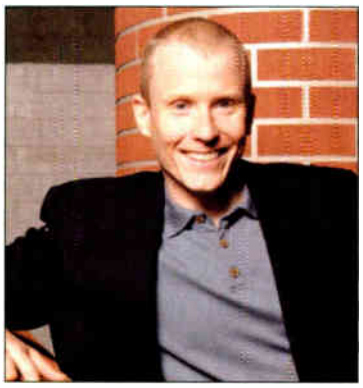
With a full line of standard products, and the ability to quickly create custom designs for special projects, Telewave provides unmatched support for Public Safety, Government, and Business radio systems.

Call us today at 1-800-331-3396 or +1 408-929-4400 and discuss your requirements with our expert sales engineers, or visit us at **www.telewave.com**

Telewave, Inc.
660 Giguere Court
San Jose, CA 95133

TELEWAVE, INC.®

Wireless Communications Manufacturers Since 1972



Beginning on page 22, **Sean McLernon,** CEO of Charleston, SC-based Stealth Concealment Solutions, discusses the importance of incorporating site concealment options during the site-planning phase instead of trying to use them as add-ons in the late-design or contruction phases of a project. By having concealment partners included from planning and design through final installation, costs can be considerably lessened. Stealth manufactured the first transmission-friendly structure to hide an unsightly antenna in 1992. Since then, the company has remained a leader in the design, engineering and manufacturing of a broad range of concealments. Sean is the author of articles on process thinking which have appeared in *Director's Monthly, US Industry Today, Industrial Engineering* and *CFO Magazine.* He has spoken at industry events and for civic organizations to help foster better understanding of the growing need for transmission antennas and the increased demand for concealment.

Taking a look at another part of the concealment equation, beginning on page 32, **Robert Hunt,** vice president of Sales and Marketing for Corona, CA-based Peabody Engineering, discusses the RF properties of materials used to construct and decorate concealed sites. Materials may give varying performance, depending on the frequencies being used. Peabody Engineering manufactures RF-Transparent Concealment (RFTC) for the wireless cellular industry. Robert has been in business development and account management for 20 years and is actively involved in bringing quality materials to the wireless industry.

There are many ways to access capital.

Which one is best for you?

Whether you need capital for building towers, wireless networks or shared infrastructure, MVP can help you find it. As one of the industry's leading advisors for M&A and capital raises, you can trust MVP to deliver results.

You deserve the best telecom advisor. You deserve MVP.

MEDIA VENTURE PARTNERS

Telecom ◆ Radio ◆ Television

www.mediaventurepartners.com

SAN FRANCISCO (415) 391-4877 BOSTON (617) 345-7316 KANSAS CITY (816) 523-8566

Common questions need common answers

I know I always say this, but "That was a great show!" I'm referring to last month's PCIA event in Orlando. So, I won't say it this time. I'm sorry if you missed it. Those of us who could attend got to hang out with a lot of "movers and shakers" in the industry.

A few points from the convention are important to share with you: Distributed antenna systems (DAS) are not a panacea, and the demand for backhaul is going to explode.

First, DAS: The notion of using fiber optics to distribute signals around a town is an attractive notion, yet much of the public's perception is that this technology can simply replace the need for traditional tower, rooftop and other sites. Although one day fiber-cable may be viewed as being as much a part of infrastructure as water pipes and power lines are when municipalities build roadways, today it remains a costly way to cover a geographic area.

While it may be true that in some municipalities, the battle can be shortened and a truce can be reached by deploying DAS, greater awareness of DAS is making it more commonplace for local government decision makers to ask for it or to push carriers toward DAS, just as the requests for a "MonoPine" became so frequent. How can "we" help balance the public's perception with the financial and engineering realities?

Enthusiasm for in-building DAS networks continues to grow faster and faster. The fine folks at ATC have been involved with DAS for years; however, the excitement over such projects is mounting.

Some of the keynote speakers were absolutely fascinating. The closing luncheon keynote speakers were Douglas Smith, chief technical operations officer at Sprint Nextel, and John A. Storch, vice president of network deployment at Clearwire. They discussed the emerging WiMAX deployments in some degree of detail. Folks, we are going to need more sites, and we are going to need backhaul, *in quantity*. Here in Northern Virginia, I'm beginning to see sites that are structurally maxed out, and we've not yet seen the AWS, 700 MHz and TerreStar folks yet. The challenge before us is to streamline our business practices, make the best use of the available resources we have and continue to try to work—what is the right word?—let's just say, "better" with the locals.

One of the keynote speakers gave the industry a slap on the wrist for our business practices. I was a bit surprised. He expressed frustration with the time it takes to get a lease executed and the relative lack of automation and use of technology in the process. We have certainly moved forward during my 25 years in the industry, but we could still set a higher bar for ourselves.

I've attended a few zoning meetings lately, and I remain surprised at the questions that are being asked. But what really surprises me is not the questions that are being asked but those that are not being answered. Why don't we have a preemptive explanation to hand out to answer the common questions? Why is a tower needed? What about RF Exposure? What about Bee Colony Collapse Disorder? Why can't you use the corn silo eight miles away? These are such common questions, I would think our industry would have common answers. Maybe I found my next project.

Keep the comments coming! agl

by Rich Biby, Publisher
rbiby@agl-mag.com

ABOVE GROUND LEVEL agl™
www.agl-mag.com
Infrastructure, regulatory and financial information for the antenna-siting community

Published 11 times a year: January, February, March, April, May, June, July, August/September, October, November and December.

PUBLISHER/CEO
Richard P. Biby, P.E.
rbiby@agl-mag.com

EXEC. EDITOR/ASSOC. PUBLISHER
Don Bishop
dbishop@agl-mag.com

MANAGING EDITOR
David A. Keckler
dkeckler@agl-mag.com

ART DIRECTOR
Scott Dolash
sdolash@agl-mag.com

ADVERTISING MANAGERS
Mercy Contreras
mcontreras@agl-mag.com
Mary Carlile
mcarlile@agl-mag.com
Phil Cook
pcook@agl-mag.com

CIRCULATION MANAGER
circulation@agl-mag.com

CORPORATE OFFICE:
Biby Publishing LLC
P.O. Box 284
Waterford, VA 20197
703-777-4358

PRESS RELEASES and ADVERTISING MATERIALS MAILING ADDRESS:
Biby Publishing LLC
P.O. Box 1578
Liberty, MO 64069-1578

SUBSCRIPTION INFORMATION: AGL (Above Ground Level) is mailed free to qualified persons in the United States working in the antenna-siting industry and related services.
To subscribe online, go to:
http://www.agl-mag.com/subscribe.html
To subscribe by mail:
ATTN: Circulation Department
AGL magazine
P.O. Box 284
Waterford, VA 20197

LYLE is a leading solutions partner in the wireless industry, providing mission critical solutions for network and infrastructure needs. We understand your challenges because we have confronted those same issues throughout our 20 year history. Lyle has the know-how to solve the problems you face with a proven track record of success. We deliver exceptional value to each and every client, more than $1 Billion this year alone. Call or email us so we can put the pieces together for your success!

LYLE

Strategic Site Development
Collocation Management
Portfolio Optimization
Professional Services
Auditing & Data Management

916.266.7000 | solutions@lylecp.com

MidAmerica Tower: OSHA 'Star'

Congratulations to MidAmerica Tower Service of Mansfield, IL. In September, the U.S. Occupational and Health Administration (OSHA) accepted MidAmerica's application to become a part of the federal agency's Voluntary Protection Program (VPP) at the Star level. MidAmerica is the first tower contractor to be accepted into OSHA's VPP since the program was formally announced in 1982.

VPP approval is OSHA's official recognition of the outstanding efforts of employers and employees who have achieved exemplary occupational safety and health.

MidAmerica's acceptance resulted from a review of its application and rigorous onsite evaluation by a team of OSHA safety and health experts.

Raphaella M. Garrett, MidAmerica's safety and training coordinator, said that despite the company's excellent safety program, it had an accident last year. "It made us work even harder to be as safe as possible and to prove it to our customers and peers. You can learn from it," she said.

Garrett said she attended a conference where she learned about VPP. She said the program has been popular in general industry, although no tower contractor before MidAmerica had been accepted.

"You have to submit a huge application and all training records," Garrett said. "They audit your job site and come to the corporate office for another audit. Ed Foulke, the assistant secretary of Labor, the top OSHA guy, signed off on our application, so we got in."

Garrett said VPP gets companies to open their doors to OSHA and say, "We're safe and realistic, and we want you to come in and work with us." She said that in exchange for a company's participation in VPP, OSHA removes the company from its programmed inspections.

OSHA sees tangible results from companies that participate in VPP: "Reductions in injuries and illnesses begin when the site commits to the VPP approach to safety and health management and the challenging VPP application process," a statement from OSHA reads. OSHA said the average VPP worksite has a Days Away Restricted or Transferred case rate 52 percent below the average for a given industry.

That tower construction comes with risks is indisputable. Fatalities at telecommunications tower sites numbered 18 in 2006, and another eight fatalities have occurred this year.

"The industry is hungry and continually improving in its efforts to reach out for new safety materials and ideas to use to improve safety," an OSHA official said.

Garrett sees MidAmerica's acceptance into VPP as a sign of things to come for tower contractors. "It's a huge accomplishment not only for OSHA but for the tower industry that a tower contractor applied and was accepted into the program," she said. agl

by Don Bishop, Exec. Editor
dbishop@agl-mag.com

Picture of the Month:

Bill Deville, project manager for Complete Towers, brought a three-section gin pole painted red, white and blue, and topped with a large American flag, for use in stacking the top 155 feet of a 275-foot guyed tower, part of a high-capacity microwave telecommunications system. 'The entire project was completed without a single safety incident, not even a bandage,' said Michael B. O'Keefe Sr., principal specialist/RF Specialty Engineering, Lyondell Chemical Company. The project included a second, 230-foot self-supporting tower. 'Stacking both towers was completed in a straight run of seven days, and this included building the platforms for the 12x12 communications shelters and mounting the shelters,' said O'Keefe, who provided this photo.

LYLE understands your needs and the challenges you face every day—**We get-it!** Our unique role resolving network and infrastructure challenges combined with 20 years of experience enable Lyle to understand your needs like no one else in the industry. That peerless understanding translates into innovative, high-value solutions for your mission-critical issues—innovative solutions that produce results. Call or email us so we can put the pieces together for your success!

LYLE

Strategic Site Development
Collocation Management
Portfolio Optimization
Professional Services
Auditing & Data Management

916.266.7000 | solutions@lyleco.com

Mark it Down for Next Year

by R. Clayton Funk

It's a spectacular morning in the "State of No Zoning" on the day after our favorite tower developer, "Johnny Multiple," returns home from Orlando, FL, and the PCIA show. Johnny is out looking at a newly erected 300-foot self-supporting tower when the crew for "Easy Erections," which has nearly completed the project, drives up.

"Hey Johnny!" shouts crew chief "Gene Ginpole," "How was the show? Whajya learn? Anything good?"

"Gene, you've *gotta* go sometime. *Everyone* was there—all kinds of vendors, tower owners, carriers, money people—and the sessions were pretty interesting. It's great to see everyone all excited about the industry and what's in store for the future," replies Johnny.

"Any good gossip?" asks one of Gene's co-workers, "Chad Caisson." "I heard something about some big carrier selling their towers. Is it "Y-Fixed Wireless" or another one of those guys?"

"Well, lots of things were talked about at the show. I heard that rumor, but mostly people were excited about carrier lease-up for next year, equipment modifications and additions like you guys are doing for some of the carriers. Then there are these new industry niches, such as DAS and backhaul. And, of course, there were a lot of educational sessions on 'Revision G,' but everyone has already heard enough about that, right?" asks Johnny.

The guys from Easy Erections nod in agreement. The newest employee on the crew, "Abe Abovegroundlevel," asks, "Johnny, what're backhaul and DAS? Are they threats to towers?"

"Well first," replies Johnny, "here is what I understand about them from the sessions I attended. 'Backhaul' refers to getting voice or data wireless traffic to the network backbone so that the call or data can be delivered from the sender to the recipient, because it can't just hop tower-to-tower. Backhaul can be either through a landline or wireless, using point-to-point or multi-point microwave

technology. Wireless was historically only used as an alternative route to the fiber or landline network when those other routes were overtaxed or unavailable. But more carriers are looking at wireless backhaul as a cheaper primary option instead of relying on the telco to supply T1s to the tower site.

"So, a wireless backhaul company leases space for a microwave dish on a tower and gives the carriers on the tower the option to backhaul their network traffic via their way instead of relying on the phone company's more expensive T1 lines. It seems to be getting a lot of attention from carriers and tower companies.

"DAS, or Distributed Antenna Systems," continues Johnny, "are typically networks of multiple antenna nodes connected together wirelessly on the same system to provide carriers service within a small geographic area or a large structure like an airport, sports arena, shopping mall or convention center. Each antenna or node is designed to blend into the environment. There is *indoor* DAS, like the examples I just gave you, or *outdoor* DAS. That would be used instead of trying to get a tower built in 'high cotton' places like Nantucket, Hilton Head or dense urban areas. I even met one company that built a DAS network in New Orleans' French Quarter."

"Oh *man*," murmurs Gene Ginpole, "There is *no way* I could work down there unless they scheduled daiquiri breaks and let us start work at noon." The guys laugh, knowing how Gene likes his Jungle Juice daiquiris in the Big Easy.

Johnny continues, "As to DAS and backhaul being *competitors* to towers—I'd say far from it. From what I heard, they are a lot like owning towers. You build a DAS or backhaul system that can support multiple customers, and you rent space to them using long-term leases. They are expensive to build and tough to get completed. Not everyone can do it, so your competition is reduced. DAS and backhaul both seem to complement the tower business. You build a DAS when a tower can't give you the same coverage, and backhaul companies are really *customers*, leasing microwave dish space on towers."

"That's pretty cool," exclaims Abe. "So, anything else we should know?"

"There's a lot—too much to tell right now. You guys should go to the next show in Hollywood, FL, in October 2008.

"Sorry, but I have to run," says Johnny. "I have to visit another tower and count the 'birdkills' at the site.

"From all the crazy stats being thrown around by various groups, each of my towers ought to have about 20 dead birds a day, so I'm checking at all of them," laughs Johnny. "Of course, I've been to five towers so far, and I have yet to see one dead bird."

Funk is managing director of Media Venture Partners, San Francisco. His email address is: *cfunk@mediaventurepartners.com*.

Dangers of Late Notice

by David Saul, AAI

Policyholders in search of serenity when presented with a claim need to begin this journey with notifying the insurance company as soon as practicable. Most of you know the need to *avoid* the dangers of late notice. But what *is* "late notice" and what are the ramifications? Failure to provide prompt notice of a claim can result in forfeiture of the very protection a policyholder was relying on when purchasing a policy.

Here are some tips on coverage:

Because Directors and Officers (D&O) liability insurance policies are what are known as "claims-made" policies, insurance companies will only provide coverage under these policies for "claims" that are:

- first made against an insured during the specified coverage period; and
- reported to the company in a timely manner during the applicable reporting period.

If a claim does not meet both of these requirements, no coverage will be available. Therefore, failure to report claims to the carrier in a timely manner will frequently result in a complete denial of coverage. To avoid this, a policyholder must be aware of what the insurance company views as a "claim" and what it will deem to be "late notice."

The standard definition of a "claim" in a D&O insurance policy includes not only the commencement of legal proceedings, but any "written demand for monetary or non-monetary relief." While the insured usually recognizes the need to give notice when it is served with a summons and complaint, mistakes are often made when an insured is faced with more "informal" communications.

The average policyholder knows that if a lawsuit lands in its lap, it should notify its carrier immediately. But many "claims" do not begin as full-blown lawsuits. A "claim" can be a demand for retraction accompanied by a threat of litigation; it can be a draft lawsuit that has not yet been filed

in court; or it can even be a telephone call or letter from a client complaining about the quality of your work.

In one recent claim situation, an insured failed to notify the carrier when it received a letter demanding equitable relief and threatening a lawsuit.

The insured did not report the letter or the underlying facts because it saw the letter as nothing more than posturing in an ongoing negotiation. Months later, when the negotiations gave way to a lawsuit and the insured finally gave notice to the insurance carrier, the company denied coverage based on late notice.

In the insurance company's view, the "claim" arose when the insured *received* the threatening letter, not when suit was ultimately filed. But what if the claim, in your view, is frivolous?

The legal viability of a claim does not bear on a policy's notice requirement. Even if a claim appears meritless, it is better to err on the side of caution and report it to the insurance carrier. Even meritless lawsuits can be complicated and costly, and in the U.S. justice system, recovery of attorney's fees is rare, absent statutory rights to such fees. Normally, insurance carriers would rather be notified of dozens of apparently bogus claims than be left in the dark until one of these claims escalates before it was tendered. Failure to give prompt notice of a claim deprives the insurance carrier of contributing to an early—and ideally a less-expensive—resolution of a claim.

The longer a policyholder waits before reporting a claim, the more it risks prejudicing itself. While the laws governing a policyholder's obligation to give proper notice of a claim vary from state to state, the ramifications of late notice can be harsh. They include:

- relieving an insurance carrier of its duty to provide a defense to the policyholder.
- relieving an insurance carrier of indemnifying a policyholder for any damages, whether those damages were the result of an adverse jury verdict or a settlement.
- relieving an insurance carrier of paying for any legal fees incurred by the policyholder prior to tender of the claim to the insurance carrier, and/or
- relieving the insurance carrier of applying legal fees incurred prior to tender of the claim to the policyholder's deductible or self-insured retention.

Many policyholders are concerned that providing notice of potential lawsuits or speculative claims to insurance companies may increase premiums. Nevertheless, if the policyholder does not give notice in these cases, it may find that it has *no* coverage when the threat later becomes a lawsuit. agl

David Saul is vice president of Atlantic Risk Management, Columbia, MD, and an accredited advisor in insurance (AAI). His email address is: *dsaul@atlanticrisk.com.*

The Big Con

Remember "The Sting," the 1973 confidence-game movie with Newman and Redford? The plot revolved around a "Big Con" built on the practice of "past-posting"—getting the "mark" to bet on a race that has already been run; one where results are already known. In a way, that's what the U.S. Government Accountability Office (GAO), Congress' investigative arm, alleges that unnamed FCC staffers are doing occasionally: "past-posting" the Commission's agenda.

The GAO's study, "Telecommunications: FCC Should Take Steps to Ensure Equal Access to Rulemaking Information" (GAO-07-1046), was undertaken at the request of Rep. Edward J. Markey (D-MA), chairman of the House Subcommittee on Telecommunications and the Internet. He didn't ask about "access," he asked for an analysis of FCC rulemaking procedures. For its report, the GAO set out to describe the FCC's rulemaking process; to examine specific rulemakings to see how well the FCC adheres to that process; and to identify factors that contribute to some dockets and rulemakings remaining open.

During its investigation, the GAO reviewed FCC rules initiated from 2002 to 2006; interviewed FCC officials and companies and organizations having business before the Commission (including PCIA, APCO and CTIA); and tracked four case studies of rulemakings originating in four Commission bureaus or offices.

What the GAO tripped across in its interviews was that some "stakeholders" (people with business before or affected by the Commission) had access to non-public information that could give them an edge in influencing the rulemaking process. The GAO said they were told by nine different stakeholders—"both those involved with our case studies and stakeholders who regularly participated in FCC rulemakings"—that they *knew* when proposed rules were scheduled for an upcoming vote well before the FCC publicly released the agenda—because they got that information from bureau and Commission staff.

"So what?" you might ask. Indeed, one thing my daddy taught me is, "It's not *what* you know, it's *who* you know." Problem is, the FCC has codified rules for itself as well as for the telecom industry. Direct or indirect disclosure of non-public information (*specifically:* content of agenda items; Commission actions or decisions at closed meetings; and items circulated internally before public release)

(Continued on page 57)

by D. A. Keckler, Managing Editor
dkeckler@agl-mag.com

Innovative Compliance Solutions Since 1969

- FCC Quarterly Inspection Waiver granted May 11, 2007, based on the ArgusON™ Eagle™ Solution
- Strobe Equipment includes:
  - Tech Eagle™ for on-site diagnostics
  - Advanced Relay Monitoring (ARM™) for detailed equipment status
- LED technology uses 90% less energy than incandescent fixtures
- ArgusON 24/7/365 National Operations Center (NOC)
  - Monitoring Services, Technical Support, and Call Center

Ask us how the ArgusON™ Eagle™ solution satisfies the FCC QLI waiver!

ArgusON™ services

LED products

Strobe products

ArgusON™

FLASH TECHNOLOGY

For more information: info@flashtechnology.biz - 888-31FLASH - www.flashtechnology.com

Failures of tower-top beacons endanger aviation and create site-owner liability. They also make a tower owner's facilities and operations susceptible to further scrutiny by the FCC's Enforcement Bureau. There is a new procedure for notifying aviators about outages. Being prepared with necessary information ahead of time will streamline your ability to report. When a lighting failure can't be fixed in the proscribed 30 minutes, it's far better to 'make one phone call' …

…Than to Curse the Darkness

by D. A. Keckler

Procedure for filing reports of temporary obstruction-lighting outages, so that a NOTAM ("Notice to Airmen") can be issued, has changed significantly this year. If you have not needed to file such a report recently, you should be aware that the old process as prescribed in the 1996 update of the FCC rules (47 CFR 17.48, "Notification of extinguishment of improper functioning of lights") is now outmoded because of changes in how the Federal Aviation Administration (FAA) does its business.

What needs reporting—and by who

First, here's what has to be reported: Tower-top steady lights and flashing obstruction lights, regardless of position, are the only ones for which an aviation advisory needs to be issued. Failure of intermediate, side, steady lights further down the tower constitute an FCC violation, but they don't concern the FAA. Its main concern is avoiding having a pilot misjudge the next light down as being the tower top. Also, when the primary lamp in a double obstruction light fails, and the secondary lamp comes on, no report is required. However, when one of the lamps in an incandescent L-864 flashing red beacon fails, it should be reported.

If the structure has not been properly registered with the FCC, you're in trouble with not one, but two, federal agencies. AFSS will not accept a filing or issue a NOTAM without your ASR number.

Exactly 12 years ago (November 1995), the FCC transferred the responsibility for registration, marking (painting) and lighting of antenna structures from FCC licensees to structure owners. As far as the FCC is concerned, this responsibility is non-transferable, regardless of any contractual agreements you as a tower owner might have with tenants, monitoring services or maintenance providers. As outlined in Part 17.2(c), the FCC defines an "antenna structure owner" as the "individual or entity vested with ownership, equitable ownership, dominion, or title to the antenna structure." The rule further stipulates that, "Notwithstanding any agreements made between the owner and any entity designated by the owner to maintain the antenna structure, the owner is ultimately responsible for compliance with the requirements of this part."

The new reporting procedure

For 40 years now, as set down in the FCC rules, the prescribed procedure has been to report the extinguishment or improper functioning of a top steady light or any flashing light "by telephone or telegraph" (the latter option is a quaint anachronism still in the rule) to the nearest Flight Service Station (FSS) or office of the FAA. This notification applies to any malfunction that cannot be corrected within 30 minutes of fault or failure.

Back in the day, when there were hundreds of FSS and FAA locations, odds are this was a local number for you—you might have even known the dispatcher by name. However, the FAA has now completely outsourced its FSS operations to Lockheed Martin, which now operates the national Automated Flight Service Station (AFSS) System. Simultaneously with this outsource of activity, the number of national FSS service centers has been compressed (18 by the end of this year). Lighting outages are no longer to be reported to these remaining FSS sites or directly to the FAA. A national call center has been established, with one toll-free number for everyone: 1-877-487-6867.

Procedurally, the information you report about your outage is routed to the appropriate specialist for issuing a NOTAM. Formerly, antenna structure owners could request a callback confirming the filing, which was not procedure but rather was done as a courtesy. This is no longer practice. The onus is now on

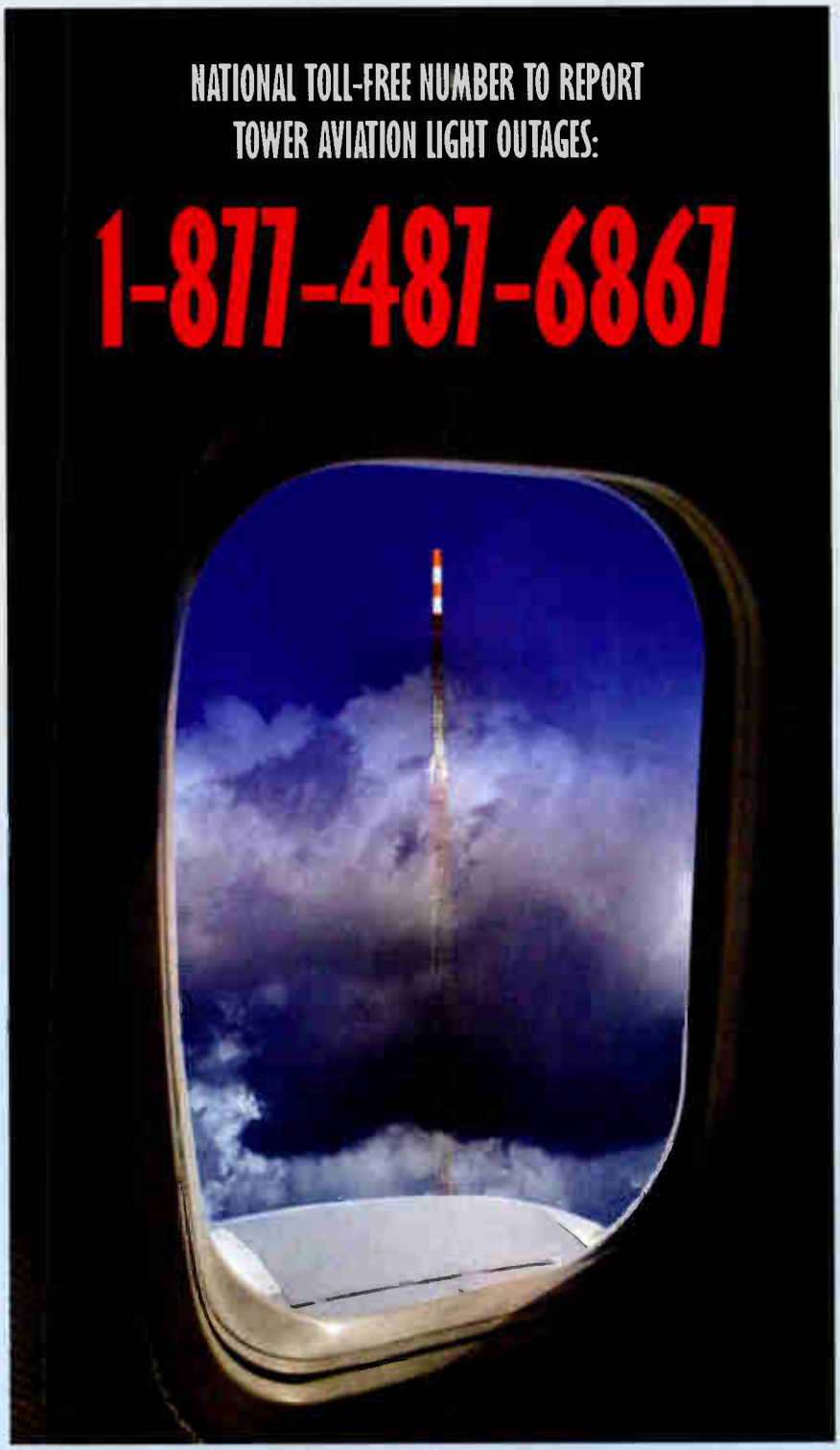
the structure owner to call back later and confirm the NOTAM information.

Consequently, any network operating center (NOC) procedures, site-manager advisories or onsite postings for service technicians inside shelters you might have distributed in the past that reference the former local FSS or FAA telephone numbers are no longer valid. You should immediately update any instructions with the above national toll-free number.

Information needed to file a report

Ideally, there are seven categories of information needed for reporting a lighting outage when you use the toll-free AFSS number. This information should be either posted at the site or readily available to the site manager or whoever might have to place the call. Have it "in hand" before you initiate the call:

1. The overall height of the structure above mean sea level (AMSL), if known, and the overall height above ground level (AGL) of the structure including appurtenances (antennas and hardware).
2. The type of structure. (For example, an unlit guyed tower presents a different risk to aviation than an unlit self-supporting tower.)
3. The name of the nearest airport, and the distance in nautical miles and orientation of the site from that airport in terms of one of 16 points of the compass (N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW). For example, "3.5 nautical miles WSW of Reagan National Airport (DCA)."
4. The name, job title or description, and telephone number of the person making the report.
5. The name, job title or description, and telephone number of the person responsible for the obstruction lights if other than the person making the report. (This contact information should jibe with the contact information on file with your FCC antenna structure registration.)
6. The projected date and time when the light is expected to be returned to service.
7. The site's seven-digit FCC Antenna Structure Registration (ASR) number. (This piece of information is mandatory, so if the structure has not been properly registered with the FCC, you're in trouble with not one, but two, federal agencies. The AFSS will not accept a filing or issue a NOTAM without the ASR number.)



As soon as normal operation is restored, the antenna structure owner is again responsible to call the toll-free AFSS number and notify them so the NOTAM can be removed. Noncompliance with notification procedures, including restoration of service, leaves you liable to penalties or forfeitures

imposed by the FCC. After 15 days, the NOTAM is automatically deleted from the system, so if your outage continues, you must call the toll-free AFSS number again to extend the outage date and update the projected return-to-service time and date.

One more note about site locations. If you have the exact coordinates of your site in longitude and latitude, you can certainly include this information in Step 3 on the above list. However, the coordinates for broadcast tower sites may be in a different format that those used by the FAA. Although one side of the FCC's house, including the Wireless Telecommunications Bureau and the Antenna Structure Registration System, use NAD83 (North American Datum 1983) coordinates, as does the FAA (since 1992), the FCC's Media Bureau Consolidated Data Base System (CDBS) is still using NAD27 (1927) coordinates. The Society of Broadcast Engineers filed a Petition for Rulemaking with the FCC in August urging the Commission to rectify this situation. Bottom line: If you use longitude and latitude to report a broadcast tower lighting outage, make sure your coordinates are based on the same system used by the FAA.

Doing the right thing

The FCC made its first overtures to ensure that the tower industry "got religion" about lighting outages at the beginning of this decade, when Forfeiture Orders imposed on the industry leapt from thousands of dollars to hundreds of thousands of dollars (much of which was directed at large, consolidator towercos). The base fine of $11,000 an incident has an even more significant effect on a small- or medium-sized towerco.

When a roving FCC Enforcement Bureau inspector notices a dead-bulb violation, his first impulse is to get out his ticket book. There have been and will be searches for additional irregularities: out-of-spec lighting; RFE levels and posting; failure to register the structure; failure to post that registration; old paint; inadequate fencing; and other violations (including EAS and station log examinations, in the case of broadcasters).

There are several ways you as a tower owner can avoid these fines. Beyond regular site inspections, you can convert obstruction lights, where appropriate, from incandescent to more more-durable LED lighting. An FCC Memorandum Opinion and Order issued last May also makes relying on automated remote light-monitoring systems an even-more attractive alternative to visual checks. It is hoped that a permanent amendment to Part 17.47 ("Inspection of antenna structure lights and associated control equipment") will be forthcoming someday soon.

And, lest we forget the most important good cause, somewhere up there in the dark every night are pilots, with lots of aircraft and passengers on their backs, who would appreciate it if you made an effort to keep the lights on for them. **agl**

The Choice is Clear.

There are three goals that must be met for antenna concealment:

RF transparency, structural integrity, and aesthetic quality. To achieve all three, you need EEI and ClearPath Technologies to effectively camouflage the most challenging tower or roof mounted antenna.

ClearPath Technologies provide solutions for the concealment of antennas using the most advanced technology in the industry. And, EEI ClearPath products have passed the most rigorous independent testing for mechanical strength, outdoor exposure, and low RF interference. Please contact us for test results on any ClearPath Technologies products.

When you need to meet the challenges of local zoning boards, optimize your network's performance and provide a structurally designed product for the environment, the choice is clear – ClearPath Technologies. Contact EEI for any information regarding ClearPath Technologies' products and services. Learn more at engend.com or call 1-888-270-3855.

- Pine and Palm Tree Systems
- Flag and Light Pole Systems
- Community Towers
- Rooftop Concealment Solutions

ENGINEERED ENDEAVORS INCORPORATED
EEI is a division of Emerson Network Power.

EMERSON Network Power

The Solution is CLEARPATH® TECHNOLOGIES

EMERSON. CONSIDER IT SOLVED.

Make Concealment Work

Carriers should make concealment their ally. The best way is to involve concealment experts during the planning phase, but it's not too late in the design and construction phases, either. It's just that costs tend to go up.

by Sean McLernon

The mobile phone rings, and the screen displays an unfamiliar number. The phone's owner answers and is greeted abruptly by the field manager for a construction firm installing a rooftop concealment. The field manager is unhappy. He hates this "concealment stuff." It always takes more time, and it's a royal pain in the neck. After a short exchange the concealment company manager promises to get his hands on the drawings and call back ASAP. Let the firefighting begin.

Does any of this sound familiar? If not, you've lived a charmed life, because this is an all-too-frequent occurrence that costs everyone involved unnecessary time and money. And what's worse, in our haste to fix the blame instead of the problem, the concealment company typically takes the brunt of the anger and frustration. In the process, concealment begins to get a reputation for being an expensive hassle, although the seeds for this fire drill were sown long before any concealment company joined the project. Specifically, the breakdown occurs in three fundamental areas: planning, design and installation. But I'm getting a little ahead of myself.

More than 15 years ago, Stealth Concealment Solutions began the wireless infrastructure industry's first efforts to methodically and professionally conceal antennas while—and this

is important—providing an optimal RF window. In the early days, providing such a window was difficult because many materials traditionally used didn't work well enough. That meant concealment, done right, probably would not be cheap. Standards had to be established and met to keep them producing enough revenue to make it successful for the carrier and make it aesthetically pleasing to the surrounding community.

A rigorous approach produced good results. Carriers received a product they could trust to be technically and cosmetically satisfactory, but one issue lingers: Some say concealment is too expensive. We don't agree that it is. We ask, "Compared to what?" Not getting the site built? Many reasons drive the perception that concealment is becoming more expensive, but the real problem is twofold: Concealment is being done more than ever, and it remains one of the more poorly planned or budgeted activities at many sites. Most carriers we work with hope that they don't have to conceal the site. Can we say something? Hope is really expensive and has no place in anyone's build-out strategy.

Because of fierce competition among concealment vendors and carriers, concealment prices have done nothing but go down during the past five years. The cost of concealment is a sideshow compared to the real cost drivers. The true cost of concealment is driven by three specific project segments, and if they're not performed in the right order at the right time, concealment will cost carriers a premium over what they intended to spend—if they intended to spend anything at all.

Planning, design and installation are the three elements critical to managing concealment dollars. For the lowest cost, these building blocks should be managed as one system or process. However, benefits may be gained by managing the blocks individually. These building blocks, when approached in a meaningful and deliberate way, can revolutionize concealment. The right approach turns a negative to a strategic advantage for the carrier willing to embrace a change their thinking regarding concealment, which, like it or not, is a growing aspect of their business. Let's look at each block separately and then tie it all together at the end.

Block One: Site planning

What do we mean by planning? Each year every carrier determines what to build during the next fiscal period. In theory, they plan the activities region by region that support the goals set by top management. Somewhere along the way, an estimate is made regarding how much concealment would be needed to build these sites. If the material we receive to generate a quote is any indication of the amount of planning used, and we believe it is, there is a lot of room for improvement. Why do we say that?

From our vantage point, the assumptions made in this concealment planning vacuum become painfully clear. At one time the penalty for this absence of planning was small, but as the demand for concealment grows, so does the cost for ignoring it. The sites themselves are carefully planned—the record of the industry speaks for itself. But concealment is an afterthought, and an increasingly expensive one at that. It need not be that way. The solution is simple: Get the experts involved. Show your plans to the concealment vendor. Make them a part of the solution instead of the problem.

I can hear the howling now: "If we let them know what we're planning, everything will get concealed." Not likely. No credible vendor would drive toward that solution. It's not feasible on any level: political, economical or environmental.

Concealment is not a panacea for the wireless industry. In the right hands, it is an effective strategic tool. To make it work, someone must let vendors help them plan wireless infraastructure build-outs. We believe our company's experience exceeds any other's in concealment the United States. How many carriers get us involved at the planning stages of their yearly build-outs? None. As a result, some sites are concealed that don't need it. Other sites are over-concealed, meaning an expensive solution was sold where a simple, straightforward application would suffice. It's painful to see.

Planning that involves a concealment vendor takes as much trust as is it does discipline. The carrier has to believe the concealment provider will bring sufficient value while placing its own self-interest below that of the carrier. It's worth trying because conducting planning with the cooperation of a concealment vendor is not any more expensive than the current method.

In an ideal world, site acquisition would take place with a concealment expert in real time. That would place the

concealment expert in the best position to identify sites that would be the most efficient for concealment purposes. When concealment vendors are involved in the planning, they influence the parameters of the design and the mechanics of the installation. When they are not involved in the planning there is still hope. Although the opportunities for concealment have a positive effect on cost, time to market and quality are somewhat diminished without early involvement, two more building blocks remain. The next, site design, holds great opportunity on an independent level to positively affect the project.

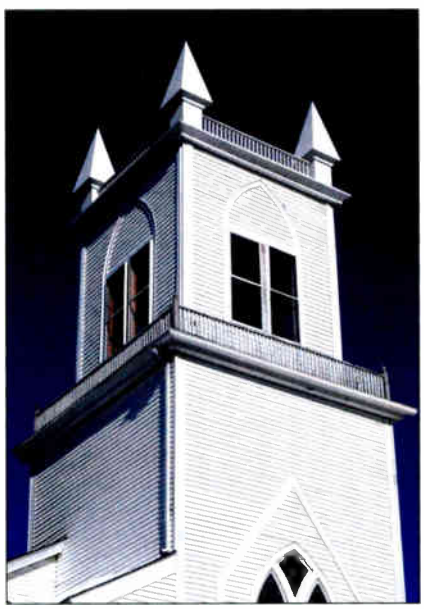
Block Two: Site design

Let's assume that it is patently ridiculous to suggest that a carrier would allow a concealment professional to help with site choice and planning. We can and do live with that notion all the time. Errors made during planning can still be remediated during site design. The most effective remediation follows an understanding of the building or land owners' expectations sooner rather than later. The reflex reaction of most carriers during site design phase is to keep the concealment vendor away for fear that they'll drive up the cost. While I'm sure that's happened in the past, most concealment vendors in business for the past eight years or more wouldn't risk the short-term gain of fattening up one site at the risk of losing all future work. As is so often the case with such a strategy, the result is the opposite of the desired effect. In other words, it almost always increases cost.

Unfortunately the concealment is design is already set in stone by the time it's awarded to a vendor. If reducing cost and saving time are among your goals, this is a bad idea. Concealment designs are complicated and challenging to design. Although many A&E have some concealment experience, they are not specialists in the field. Without really trying, a site can be over-engineered, driving material costs north in a hurry. Concealment vendors not only work with designs every day, but also the materials too. They know what the capability of various materials, and many vendors conduct research and development to ensure only the best and most advanced material is used. No A&E can keep up with all the nuances associated with concealment.

A well designed concealment produces benefits well beyond the edges of the drawing. It keeps material cost down and in many cases the right design drastically reduces installation costs. The savvy designer knows not only how keep cost down in the shop, but also in the field, all the while never losing sight of the all-important RF window.

Conservatively speaking, allowing an expert design the site would save a minimum of 20 percent nearly every



time. Would you let an architect design your car? No, you would pick people that know how to design cars. The same principle applies here. Let the experts do their work.

The design phase is a carrier's last chance, because a misstep here not only affects material cost, it travels all the way out into the field where big money can be spent in a hurry. Let's take a look at the third and final building block: installation.

Building Block: Site installation

The beginning of this article referred to a call from an irate on-site construction manager screaming about how "this piece of junk won't go together" or that he didn't have this or that in his quote. As a frequent recipient of these calls, our company knows they happen all too often. Here's the good news: They don't have to.

But the question is, "What can you do at this point?" Perhaps not much, yet there is something to do just ahead of this point: Avoid going cheap on installation. Many do. If I cannot convince you that cheap is not the answer, let me offer a few other points to consider or—better yet—questions to ask.

Has your installer ever done a roof top concealment before? Chances are, the installer hasn't, and if the installation team is familiar with concealment, usually it's limited to the pole variety. There is a big difference between erecting a pole and installing rooftop concealment. One is for iron workers; the other is for finish carpenters. It's a subtle but important difference, so be sure your installer has both types of experience.

Has your installer spoken with the concealment manufacturer to learn and understand what the installation entails? If the installater hasn't, that's a big red flag. You should simply insist that the installer communicate with the manufacturer to ensure the fastest and least expensive installation. If you're really on the ball, make them quote the job after speaking with the concealment vendor.

Have you asked your concealment provider for recommended installers? Not everyone would give you recommendations, but in regions where a tremendous amount of work has been done, such as the Tri-States in the Northeast or in Southern California, a concealment manufacture knows the score. Check it out.

There you have it: the 3 building blocks for concealment success with success being defined as costing you, the carrier, less money, time and hassle. For the best results all three building blocks should be managed well in advance of the on-air date, but life rarely works out that way. We understand.

We hope this information demonstrated not only the value of pulling these building blocks together and managing them as a whole, but also showed you a few techniques to work your way out if you're in somewhere in the middle of your project. Remember, concealment is not the enemy. agl

McLernon is CEO of Stealth Concealment Solutions, North Charleston, SC.

ALLIANCE™ CORPORATION

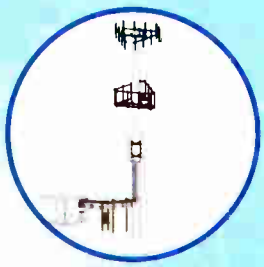
THE POWER OF BEING CONNECTED.

OTHERS PROMISE THE MOON WE GIVE YOU THE WORLD

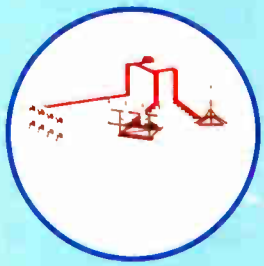
ANDREW®

ANDREW STEEL PRODUCTS

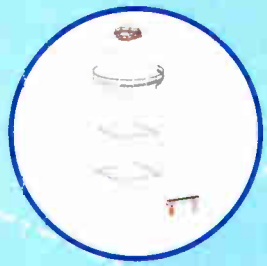
Tower Applications



Monopole Applications



Roof-Top Applications



Water Tower Applications

Waveguide Bridge Components

Alliance Corporation has been serving the Wireless industry since 1993, specializing in the highest quality products from the world's leading manufacturers. We stock, distribute and supply a full line-up of Wireless infrastructure products that cover all aspects of the industry. Our mission is to deliver total customer satisfaction at all levels. **Make Alliance the one source for all of your Wireless needs! Experience the "Alliance Advantage" Today! Call 1-866-243-7378 ext 258.**

HARGER · Powerwave · EMS Wireless · PCTEL Antenna Products Group · TIMES · GENERAC POWER SYSTEMS, INC. · TRYLON TSF ISO 9001 2000 Registered · RADIO WAVES

ALLIANCE™ CORPORATION

THE POWER OF BEING CONNECTED.

alliancecomm.com

Alliance Corporation
1.866.243.7378 Ext. 258
wirelessinfo@alliancecomm.com

AGL Financial Directory

A quick reference of services offered in the areas of appraisals, attorneys, business brokers, financial consultants, financial services, insurance, loans, real-estate services and site acquisition.

Arthur J. Gallagher Risk Management Services, Inc.
1900 West Loop South, Suite 1600
Houston, TX 77027
Phone: 713-623-2330
Fax: 713-358-5787
www.ajg.com
Contact: Sarah Barton
Sarah_Barton@AJG.com
Services: Insurance

Atlantic Risk Management
5850 Waterloo Rd., Ste. 240
Columbia, MD 21045
Phone: 410-480-4400
Fax: 410-465-0759
www.towerinsurance.net
Contact: David Saul
saul@atlanticrisk.com
Services: Insurance
• see ad; inside front cover

Barker Capital, LLC
10 Rockefeller Plaza Ste. 910
New York, NY 10020
Phone: 212-332-4310
Fax: 212-332-4315
www.barkercap.com
Contact: Samantha Ives
sai@barkercap.com
Services: Financial services.
Barker Capital LLC brings high-quality, specialized investment banking services to underserved media companies and tower owners with a focus on valuations from $4 million to $15 million. Additionally, we invest a fund that provides senior loans to tower companies, provided a minimum loan amount of $4 million.

Barkley Tower Capital, LLC
P.O. Box 553
Rye, NY 10580
Phone: 914-262-3915
Fax: 914-206-3680
www.barkleytower.com
info@barkleytower.com
Services: Financial consultants

Berger Briggs Real Estate and Insurance, Inc.
P.O. Drawer K
Albuquerque, NM 87103
Phone: 505-247-0444
Fax: 505-243-1505
www.bergerbriggs.com
Contact: Larry W. McClintock
lmcclintock@bergerbriggs.com
Services: Real-estate services

Blooston, Mordkofsky, Dickens, Duffy & Prendergast, LLP
2120 L Street, N.W., Suite 300
Washington, DC 20037
Phone: 202-828-5540
Fax: 202-828-5568
www.bloostonlaw.com
Contact: John Prendergast
jap@bloostonlaw.com
Services: Attorneys

Carrier Class Deployment Services, LLC
1706 Hillcrest Rd.
Glenside, PA 19038
Phone: 267-481-1461
Fax: 215-836-5545
Contact: Jim Innes
innesj@i-2000.com
Services: Real-estate services

Cellere LLC
4110 Copper Ridge Drive, Suite 204
Traverse City, MI 49684
Phone: 231-929-4555
Fax: 231-929-0099
www.cellere.us
Contact: T. Larsen
tlarsen@cellere.us
Services: Site acquisition

CellTex Site Services, Inc.
P.O. Box 700452
San Antonio, TX 78270
Phone: 210 219-5529
Fax: 210 495-6129
www.CellTexTowers.com
Contact: Greg Huber
cghuber@CellTexTowers.com
Services: Real-estate services; site acquisition

CMX
1101 Laurel Oak Road
Vorhees, NJ 08043
Phone: 856-772-0313
Fax: 856-772-0515
www.damianolong.com
Contact: Kenneth Long
klong@damianolong.com
Services: Consultants; site acquisition

DataNet, Inc.
1127 Pennsylvania St.
Denver, CO 80237
Phone: 303-320-1800
Fax: 303-320-1703
www.datanet.com
Contact: Drew MacDonald
dmacdonald@datanet.com
Services: Real-estate services; site acquisition; financial services

Fairmount Partners
Investment Banking
Four Falls Corporate Center
West Conshohocken, PA 19428
Phone: 610-260-6236
Fax: 610-260-6288
www.fairmountpartners.com
Contact: Tony Parisi
tony.parisi@fairmountpartners.com
Services: Business brokers; financial consultants

Flaster/Greenberg P.C.
1810 Chapel Avenue West
Cherry Hill, NJ 08002
Phone: 856-661-1900
Fax: 856-661-1919
www.flastergreenberg.com
Contact: Janet Levine
janet.levine@flastergreenberg.com
Services: Attorneys

Henderson Brothers, Inc.
920 Fort Duquesne Blvd.
Pittsburgh, PA 15222
Phone: 412-261-1842
www.hendersonbrothers.com
Contact: Clem J. Wandrisco, AAI
cjwandrisco@hendersonbrothers.com
Services: Insurance

Higgs Law Group, LLC
1028 Brice Road
Rockville, MD 20852-1201
Phone: 301-762-8992
Fax: 301-762-8993
www.higgslawgroup.com
Contact: Michael Higgs
mhiggs@higgslawgroup.com
Services: Attorneys.
HLG attorneys are problem solvers with the knowledge and experience necessary to tackle any tower-related business transaction. Specializing in tower-related contracts, HLG can also assist with FCC and FAA enforcement, litigation and negotiations. Thinking of buying or selling towers? HLG's brokerage services will prove invaluable in any transaction.
• see ad on page 58

Hirschfeld Communications LLC
950 3rd Ave.
New York, NY 10022
Phone: 212-218-4666
Fax: 212-218-4660
www.hirschfeldcommunications.com
Contact: Jim Holmes
jholmes@hirschfeldcomm.com
Services: Financial consultants; site acquisition

Infinite Site Services, LLC
5910 East Conservation Drive
Frederick, CO 80504
Phone: 720-427-1984
Fax: 720-494-0508
www.infinitesiteservicesllc.com
Contact: Jim Gold
issllc@mesanetworks.net
Services: Site acquisition

Innovative Title Agency
1864 Route 9 South
Toms River, NJ 08755
Phone: 877-371-7400
Fax: 866-730-1098
www.innovativetitleagency.com
Contact: Michael LaBarbera
michael@innovativetitleagency.com
Services: Insurance; real-estate services

Integra Realty Resources
110 South Jefferson Road - 2nd Floor
Whippany, NJ 07981
Phone: 973-538-3188
Fax: 973-515-2999
www.irr.com
Contact: John Gillooly
jgillooly@irr.com
Services: Appraisals; real-estate services

KGI Wireless
Building Four, Suite 520, 6200 Bridge Point Parkway
Austin, TX 78730
Phone: 512-345-9595
Fax: 512-345-9898
www.KGIWireless.com
Contact: Jennifer Washington
Jennifer@KGIWireless.com
Services: Tower marketing and licensing

Lyle
3140 Gold Camp Drive, Suite 30
Rancho Cordova, CA 95670
Phone: 866-434-LYLE
Fax: 916-266-7001
www.LYLECO.com
Contact: Pat Poling
patpoling@lyleco.com
Services: Real-estate services; site management & acquisition
• see ads on pages 9 and 11

MCM, Inc.
40 Woodland St.
Hartford, CT 06105
Phone: 888-973-7483
Fax: 860-727-5762
www.mcmgmt.com
Contact: Hans Fiedler
hfiedler@mcmgmt.com
Services: Site acquisition

Media Services Group
3948 South Third Street, #191
Jacksonville Beach, FL 32250
Phone: 904-285-3239
Fax: 904-285-5618
www.mediaservicesgroup.com
Contact: George R. Reed
reedmsconsulting@cs.com
Services: Business brokers

Media Venture Partners
244 Jackson Street, 4th Floor
San Francisco, CA 94111
Phone: 415-391-4877
Fax: 415-391-4912
www.mediaventurepartners.com
Contact: Jason Hill
jhill@mediaventurepartners.com
Services: Appraisals; business brokers; financial consultants; financial services
• see ad on page 7

MegaCom
14301 FNB Parkway
Omaha, NE 68118
Phone: 402-697-5863
Fax: 402-697-5808
www.megacom-ne.com
Contact: Mark Maenner
mmaenner@megacom-ne.com
Services: Real-estate services; site acquisition

MidAmerica Towers, Inc.
17641 South Haas Rd.
Mokena, IL 60448
Phone: 815 485-7367
www.midamericatowers.com
Contact: Jan Panozzo
jay@midamericatowers.com
Services: Site acquisition

Mobile Relay Associates
15330 Vermont Ave.
Paramount, CA 90723
Phone: 323-636-5202
Fax: 562-408-1892
www.mra-raycom.com
Contact: Joyce Peters
joyce@mra-raycom.com
Services: Site acquisition

Mountaintop Services, Inc.
10 Quarry Rd., Ste. C
Bolton, CT 06043
Phone: 860-647-7772
Fax: 860-647-8519
www.mountaintopservices.com
Contact: Milton Hathaway
mts@mountaintopservices.com
Services: Real-estate services; site acquisition

Near Earth LLC
90 Park Avenue, 16th Floor
New York, NY 10016
Phone: 646-843-9799
Fax: 646-843-9770
www.nearearthllc.com
Contact: Dan Ramsden
dan@nearearthllc.com
Services: Appraisals; financial advisors; financial services

Vincent F. O'Flaherty, LLC
4700 Belleview Ave., #210
Kansas City, MO 64112
Phone: 816-753-6006
Fax: 816-502-7898
Contact: Vincent O'Flaherty
voflaherty@spradleyriesmeyer.com
Services: Attorneys; real-estate services

Pegasus Tower Company
P.O. Box 233
Richlands, VA 24641
Phone: 276-964-7416
Fax: 276-963-2587
www.pegasustower.com
Contact: Brian Earls
bearls@pegasustower.com
Services: Site acquisition

Pike & Fischer
1010 Wayne Avenue, Ste. 1400
Silver Spring, MD 20910-5600
Phone: 301-562-1530
Fax: 301-562-1521
www.pf.com
Contact: Meg Hargreaves
mhargreaves@pf.com
Services: Attorneys

Powder River Development Services
2523 Garfield St., Suite A
Laramie, WY 82070
Phone: 307-742-9416
Fax: 307-742-6280
www.powderriverdev.com
Contact: Andrew Dewhirst
drew.dewhirst@powderriverdev.com
Services: Real-estate services; site acquisition

RBC Daniels, L.P.
3200 Cherry Creek South Drive, Suite 500
Denver, CO 80209
Phone: 303-778-5555
Fax: 303-778-5599
www.rbcdaniels.com
Contact: Don Bechter
don.bechter@rbcdaniels.com
Services: Appraisals; business brokers; financial services; loans

RealCom Associates
14432 SE Eastgate Way, Suite 260
Bellevue, WA 98007
Phone: 425-274-4444
Fax: 425-274-4449
www.realcomassoc.com
Contact: Jeanette Evans
jevans@realcomassoc.com
Services: Site acquisition

RJR Wireless
23501 Park Sorrento, Suite 218
Calabasas, CA 91302-1381
Phone: 818-222-7483
Fax: 818-222-7487
Contact: Rich Reichler
rjrwireless@aol.com
Services: Site acquisition

S&W Capital and Realty, LLC
1515 Mockingbird Lane, #500
Charlotte, NC 28209
Phone: 908-907-5564
www.sandwcapital.com
Contact: Michael LaBarbera
mlabarbe@optonline.net
Services: Financial services; real-estate services

Saul Ewing LLP
Centre Square West 1500 Market St., 38th floor
Philadelphia, PA 19102
Phone: 215-972-7777
Fax: 215-972-7725
www.saul.com
Contact: George Asimos Jr.
gasimos@saul.com
Services: Attorneys

Schwaninger and Associates, P.C.
1331 H Street NW, Ste. 500
Washington, DC 20005
Phone: 202-347-8580
Fax: 202-347-8607
www.sa-lawyers.net
Contact: Robert Schwaninger
rschwaninger@sa-lawyers.net
Services: Attorneys; business brokers

SecuraSite LLC
1631 NE Broadway, #100
Portland, OR 97232
Phone: 503-781-9762
Fax: 425-952-9481
www.securasite.net
Contact: Bjorn Morfin
bmorfin@securasite.net
Services: Real-estate services

SiteLink Tower Development LLC
2475 Northwinds Parkway, #200
Alpharetta, GA 30004
Phone: 301-663-9240
Fax: 301-663-9241
www.sitelinkwireless.com
Contact: David Yacoub
Sitelink@sitelinkwireless.com
Services: Financial consultants; site acquisition

Stark Capital Solutions, Inc.
5829 N. Post Road
Indianapolis, IN 46216
Phone: 317-546-6038

Fax: 317-546-6028
www.starkcapitalsolutions.com
Contact: Chris Stark
cstark@starkcapitalsolutions.com
Services: Financial services; loans

Steel in the Air, Inc.
6505 E. Town and River Road
Fort Myers, FL 33919
Phone: 813-335-4766
Fax: 813-335-4053
www.steelintheair.com
Contact: Ken Schmidt
ken@steelintheair.com
Services: Appraisals; attorneys

SteelTree Partners, LLC
406 Haverford Place
Swarthmore, PA 19081
Phone: 610-544-1118
Fax: 732-875-1115
www.steeltreepartners.com
Contact: Bruce Wendt
bruce@steeltreepartners.com
Services: Financial Consultants; real-estate services

SubCarrier Communications, Inc.
139 White Oak Lane
Old Bridge, NJ 08887
Phone: 732-607-2828
Fax: 732-607-1390
www.subcarrier.com
Contact: John Paleski
johnpaleski@subcarrier.com
Services: Site acquisition
• see ad; back cover

Telecom Site Services, LLC
P.O. Box 311
Jenkintowns PA 19046
Phone: 866-66-CELLSI
www.TelecomSiteServices.com
Contact: Eric Skurka
info@TelecomSiteServices.com
Telecom Site Services offers financial solutions for wireless landlords. Our core product offers landlords an average of 110x's their current monthly rental amount in a lump sum cash payment. Contact TSS today for an evaluation of your current wireless holdings. We look forward to speaking with you soon.

Tower Economics
700 Rt. 130 North
Cinnaminson, NJ 08077
Phone: 856-786-7200
Fax: 856-786-7450
www.towereconomics.com
Contact: Len Stephens
len@towereconomics.com
Services: Site acquisition

Tower Services
P.O. Box 374
Davidsonville, MD 21035
Phone: 301-261-7755
Fax: 301-261-7785
Contact: Kelly Klimecki
towerserv@aol.com
Services: Business brokers; real-estate services

Towers of Texas
HCR 1, Box 2000
Sandia, TX 78383
Phone: 800-447-9115
Fax: 361-547-0159
www.towersoftexas.com
Contact: Charlie Bednorz
cbednorz@towersoftexas.com
Services: Site acquisition

Unison Site Management
P.O. Box 826
Ardmore, PA 19003
Phone: 610-613-6927
Fax: 215-689-1562
www.unisonsite.com
Contact: Mark Roscioli
fmr1980@yahoo.com
Services: Financial Consultants; site acquisition

Utility Service Communications
535 Courtney Hodges Blvd.
Perry, GA 31069
Phone: 800-679-7819
Fax: 478-987-1844
www.utilityservice.com
Contact: Debbie Sullivan
dsullivan@utilityservice.com
Services: Site acquisition
• see ad on page 14

VCOMM
1710 Walton Drive
Blue Bell, PA 19422
Phone: 610-684-1000
Fax: 610-567-0150
www.vcomm-eng.com
Contact: Dominic Villecco
dominic.villecco@vcomm-eng.com
Services: Site acquisition

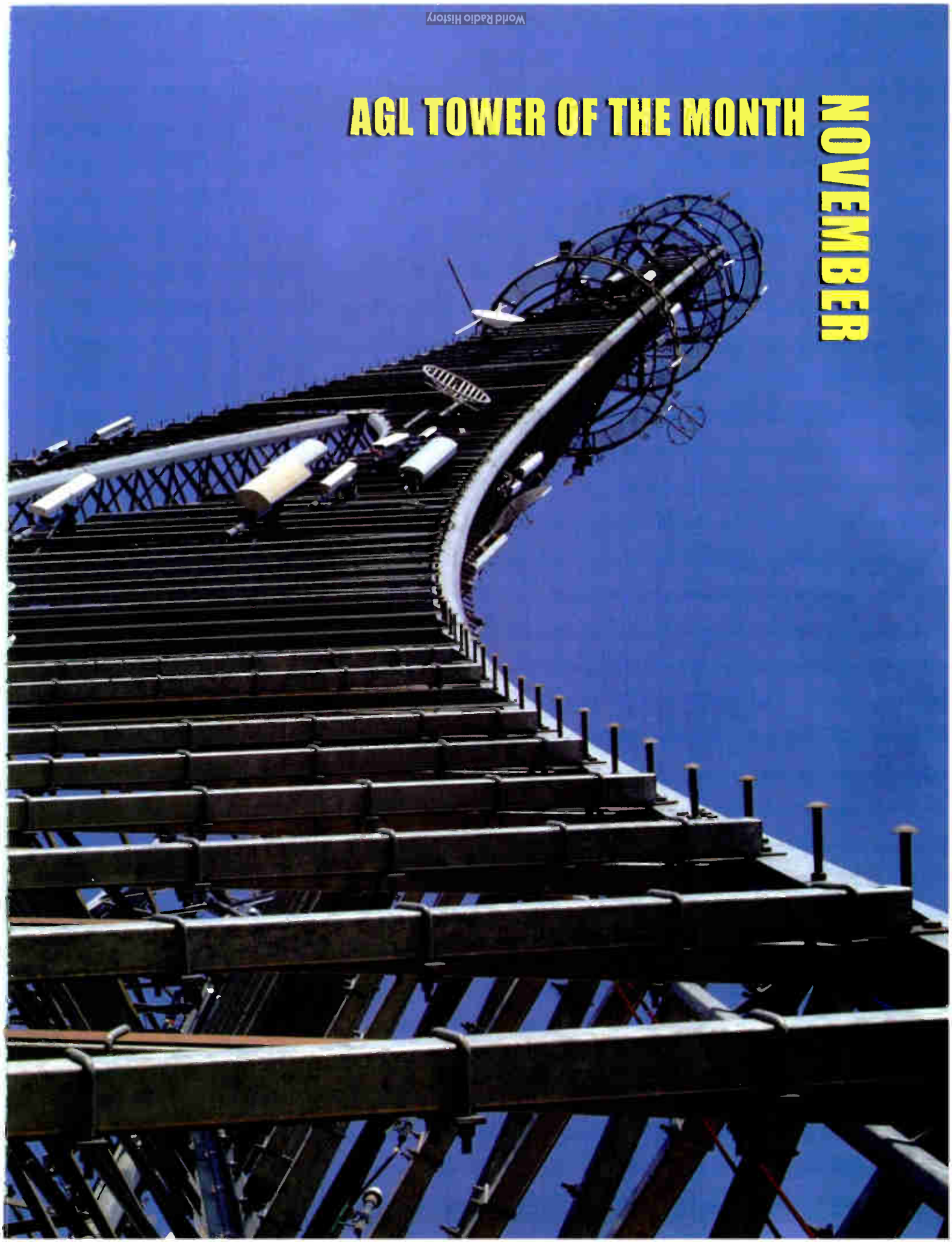
White Pine Land Company
4110 Copper Ridge Drive, Suite 255
Traverse City, MI 49684
Phone: 231-929-3434
Fax: 231-929-7011
www.whitepinecompanies.com
Contact: Roland Cilke
perreca@whitepinecompanies.com
Services: Real-estate services

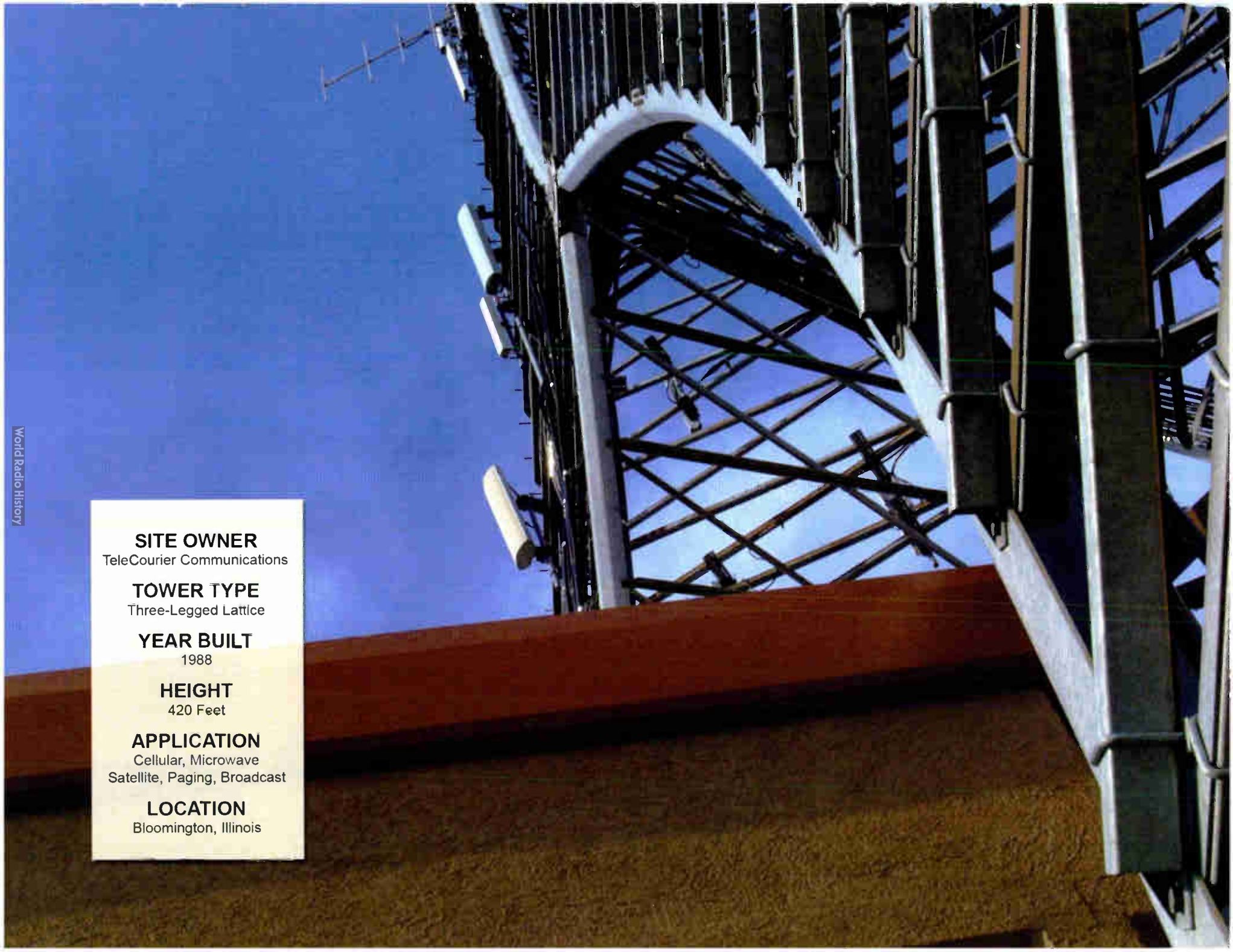
Wireless Capital Partners, LLC
11900 W. Olympic Blvd., Suite 400
Los Angeles, CA 90064
Phone: 866-432-2274
Fax: 866-448-1078
www.wirelesscapital.com
Contact: Louise Wong
lwong@wirelesscapital.com
Services: Financial consultants; financial services; loans
• see ad on page 55

Wireless EDGE
270 North Avenue, Suite 809
New Rochelle, NY 10801
Phone: 914-712-0000
Fax: 914-712-9005
www.wirelessedge.com
Contact: John Arthur
arthur@wirelessedge.org
Services: Site Acquisition.
Wireless EDGE is a premier provider of network implementation services & strategic tower sites. Nationwide services include: tower development, site management, development of cell sites & satellite terrestrial repeaters, special projects. We specialize in development & permitting of antenna sites on landmark & historic properties.

AGL TOWER OF THE MONTH

NOVEMBER





SITE OWNER
TeleCourier Communications

TOWER TYPE
Three-Legged Lattice

YEAR BUILT
1988

HEIGHT
420 Feet

APPLICATION
Cellular, Microwave
Satellite, Paging, Broadcast

LOCATION
Bloomington, Illinois

Materials for concealing antennas must exhibit proper RF performance. Some materials might provide satisfactory insertion loss when used for lower frequencies but perform poorly when used for higher frequencies. BY ROBERT HUNT

Something to hide

There is a big disconnect between desire and reality when it comes to adding RF transparent concealment (RFTC) to wireless cell sites. Nobody wants to add concealment to the cell sites—except for concealment providers—but local planning and zoning departments often require it, and demand is increasing across the nation. If you're not using concealment already, you soon will be, and you ought to do it right.

The RF engineer works to create a site that offers the best coverage for an area, specifying location, height and azimuths. However, a design sometimes includes compromises made to save money and meet start deadlines. Wireless carriers often play a game of "hurry up and wait" until the site has a permit and the installer receives a notice to proceed (NTP). When the permit is released, the carrier needs the site *now*. The application has been with the city zoning department for eight months, and now the site activation is *late*.

Using the proper RF-transparent materials speeds initial antenna installation, ensures actual coverage comes as close as possible to predicted coverage, and avoids expensive retrofitting when carriers add new spectrum.

Most carriers direct installers to include RFTC as part of the bid process with the understanding that the final product will be as designed. Most general contractors (GCs) have knowledge and experience, yet some may be unaware of poor results caused by using the wrong materials.

Some installers use materials without proper RF performance for concealing wireless antennas. Less than one decibel (dB) of insertion loss is the ideal target for RFTC, and the less loss the better. Some materials may have satisfactory insertion loss in a low-spectrum frequency such as 700 MHz, yet poor performance more widely used higher spectrums such as 1900 MHz and above. Some installers build screen walls using pultruded fiberglass-reinforced plastic (FRP) shapes. Structurally sound, some FRP products have city architectural approval that facilitates an easy sign-off through the permitting process. Unfortunately, their FRP RF performance is satisfactory for higher spectrums used by CDMA, 4G and WiMax technologies. With the increased demand for backhaul, good RFTC performance into the higher microwave spectrums is important.

Peabody RFTC panels have been tested by an independent lab and have been found to have less than 1 dB of insertion loss in all spectrums wireless carriers commonly use. RF engineers can be assured of solid RF transmission when using Fiberscreen and Polyscreen panels in these spectrums.

Some installers have used materials without independent RF test data, perhaps assuming that if others have used similar materials, it should be okay. What works for one carrier may not work for another because of the different spectrums involved. In the same way that my Verizon phone doesn't work on the T-Mobile network, some materials won't provide the necessary RF signal transparency when used to conceal a cell site. For sites with multiple collocated carriers, screening products must be selected to work in all spectrums and with a variety of antennas used from iDEN to microwave.

Wireless cell sites should perform to RF levels for which they were designed to avoid adding costly new sites later to fill in the gaps. Ask your RFTC supplier for third-party test data on the materials they supply for the spectrum you use to ensure adequate results. Carriers eventually modify or upgrade many antennas, and they need a concealment system not only for today's antennas but also for the antennas of the future that support higher-speed wireless networks.

Another problem may occur when installers use material with proven RF performance and then add FRP pultruded shapes for structural support to hold RF-transparent material in place. Unfortunately, this degrades the site's RF performance, leaving RF engineers wondering where they went wrong. Custom-molded Fiberscreen panels have molded, integral returns on the backsides and do not require FRP shapes for support. This allows the

panels to be bolted to the building and adjoining panels from behind, avoiding unsightly nuts and bolts on the face or on the secondary external insulation finish system (EIFS) process to cover them that adds cost, time delays and probable RF signal degradation.

The wise buyer looks at the entire cost of the build and final RF performance as a package deal. It's of no value to build a site on time and under budget that does not give the carriers the RF transmission that led them to add the site in the first place. Just because the site passes the sweep test—which can be tweaked to pass in most cases—it doesn't mean the coverage will be what the RF engineer designed.

If you're concerned about cost, ask your RFTC supplier to support your site-acquisition and A&E teams so the site is designed with the correct type and least concealment possible. Architects sometimes list a screening product that meets a building code, but then they draw a surface texture such as molded-in, split-face brick, that requires the installer to use a different material. The GC has to substitute materials, thus requiring new engineering and delays costing more money than it would have occurred with a proper design at the beginning.

Know the true cost of the of the RFTC system you buy. It should be cost-effective to buy *and* install. "Fabricated" means fully built and ready to bolt to the building, not cut into pieces and sent to the site in a pile where the installer has to figure out how to assemble it. The installed cost of a fully pre-fabricated, bolt-in-place RFTC system costs far less than traditional "sheet and angle" build-on-site products because of savings in labor and installation costs. Those who fail to consider labor and installation costs often end up over budget.

RFTC material should be fire retardant to meet local zoning requirements, and the installed product should look as though it were meant to be a part of the building. The "inexpensive," ugly site with poor RF performance installed today will make it harder to obtain the next site approval. You have enough trouble with the zoning departments without them being up in arms about the most recent bottlebrush pine tree or shoddy looking screen wall installed in their beautiful city. City planning departments are already concerned about the increase of cell sites in their towns, and it will be a lot harder to add a second site if the first one doesn't look the way you said it would.

Keep the final goal in sight. It will help the finished site perform as intended today and in the future. Even though "night and weekend minutes are free," you get what you pay for when buying a c oncealment system. A high-quality RFTC system costs more, but it's worth every penny. agl

Hunt is vice president of sales and marketing for Peabody RF Transparent Concealment, Corona, CA.

Wireless Infrastructure Show draws 1,500 to Orlando

Tower companies and their vendors came together at PCIA's convention to learn how to better serve their customers. Tower companies focused on carriers, whose managers participated in panel sessions. Vendors used the exhibition's exclusive hours to offer wares to tower owners.

PCIA President and CEO Michael Fitch (center) is joined by the 'Titans of Towers.' From left: John Kelly, Jim Taiclet, Fitch, Marc Ganzi and Jeff Stoops. *Photo courtesy of AXESSGRAFX.*

by Don Bishop

An estimated 1,500 attendees came to Orlando, FL, for the 2007 Wireless Infrastructure Show at the Rosen Shingle Creek, Oct. 1–4, 2007. Convention-goers visited vendors during an exhibition that included about 90 booths. PCIA – the Wireless Infrastructure Association, conducted the convention. PCIA represents wireless telecommunications tower owners, rooftop telecom site managers and distributed antenna system (DAS) owners. PCIA's members own and manage more than 111,000 telecommunications towers and antenna facilities that support analog, digital and broadcast services across the country.

James "Jim" Taiclet, chairman and CEO of American Tower, was named as chairman of PCIA's board of directors, succeeding Jeffrey A. Stoops, president and CEO of SBA Communications, who continues as a director. Marc Ganzi, CEO and president of Global Tower Partners, was named vice chairman and secretary. Thomas "Tam" Murray, founder and managing partner of Community Wireless Structures, was named PCIA's treasurer.

"I thank Jeffrey Stoops for his guidance as past chairman of the board," said Michael Fitch, president and CEO of PCIA, and himself a board member. "Our organization continued its growth during his tenure as chairman and will continue our successful efforts on behalf of the wireless infrastructure industry."

Other directors include John P. Kelly, president and CEO of Crown Castle International; and David Weisman,

Doug Smith, chief technical operations officer for Xohm at Sprint Nextel, said his company would need 12,000 sites for the Xohm network alone, next year. 'We've ordered 20,000 antennas this year,' he said.

John Storch, vice president of network deployment at Clearwire, encouraged tower owners to look at supply chain automation to allow carriers such as Clearwire 'to get on your sites quicker and start paying you rent quicker.'

Robert S. Foosaner, senior vice president and chief regulatory officer of Sprint Nextel and a member of PCIA's 2007 board of directors, said the association needed to attract more wireless carrier representatives.

president and CEO of InSite Wireless.

Robert S. Foosaner, senior vice president and chief regulatory officer of Sprint Nextel, retired from the PCIA board on October 3. Foosaner was the only PCIA director employed by a wireless carrier. At the Policy Makers' Breakfast that he led, Foosaner said, "There are less of your customers here than you would like," referring to carrier representatives. "That would be a customer-oriented issue for next year, to bring them in."

Sprint needs 12,000 sites

Foosaner's colleague, Doug Smith, chief technical operations officer for Xohm at Sprint Nextel, told a luncheon audience that Sprint would need 12,000 sites for the Xohm network alone, next year. "We've ordered 20,000 antennas this year," he said.

Xohm is Sprint's WiMAX mobile Internet initiative. "This isn't going from 1G to 2G to 3G. It truly is different. This is a broadband network that we're taking wireless," he said. That network is hungry for backhaul: "We need to think in terms of 10 Mbs to 100 Mbs per site. We are not just deploying a WiMAX network; we have to deploy backhaul. We are doing that with lots of partners. We need to find bigger pipes and more of them. ... We have commitments for 50 million devices to enter the market with our launch. One of the reasons we can go fast is we have 60,000 cell sites with IDEN and our other network."

Collocaton serves Clearwire

Clearwire's vice president of network deployment, John Storch, spoke at the same luncheon. "We offer pre-WiMAX Expedience from Motorola, but we are going toward WiMAX," he said.

Clearwire uses collocation. "There are tens of thousands of aerial assets for the ability to steal for the third channel. There is little reason for us to build aerial assets," he said.

Storch chided tower owners: "We want to be on your sites. It's difficult to get on today. The information today often is invalid or incorrect. It's frustrating as a carrier to find that once we get to the site, there is equipment blocking us."

The Clearwire executive added, "When aerial assets become encumbrances, it makes it difficult for us to be successful and to use your assets. The tower site is a huge paper chase. There are engineering tools to allow sites to be run dynamically by the customer. Seriously, the industry needs to look at supply chain automation. ... It will allow us to get on your sites quicker and start paying you rent quicker."

There is still a lot of education to do. We are here to serve the needs of members and to get the information out there so people can make good decisions about the technology.

The broadband theme carried throughout the convention, amplified at another luncheon by keynote speaker and FCC commissioner Jonathan Adelstein. "We must re-double our efforts to encourage broadband development by increasing incentives for investment, because we will primarily rely on the private sector as the driver of growth. These efforts must take place across technologies so that we not only build on the traditional telephone and cable platforms, but also create opportunities for deployment of fiber-to-the-home, fixed and mobile wireless, broadband over power line, and satellite technologies," Adelstein said.

The commissioner called the upcoming 700 MHz auction a "historic opportunity" to facilitate the emergency of a third broadband platform. In a nod to tower owners who benefit from rapid deployment of equipment for new spectrum allocations, Adelstein said, "Our build-out requirements are the most aggressive we have ever approved."

At the Orlando convention, the DAS Forum marked its one-year anniversary. At a breakfast meeting, Allen Dixon, its

NATE
National Association of Tower Erectors

Providing a Unified Voice for Safety, Standards and Education

National Association of Tower Erectors

8 Second Street SE
Watertown, SD 57201-3624
Tel: 605-882-5865
Toll Free: 888-882-5865 (U.S.)
Fax: 605-886-5184
Email: nate@natehome.com

For over a decade the **National Association of Tower Erectors (NATE)** has led the way in safety and education for the tower construction industry.

Active in all facets of the trade, NATE has become recognized as the leader in telecommunications and broadcast construction procedures and practices.

The **Annual NATE Conference & Exposition** is widely regarded as the most comprehensive and up-to-date event in the broadcast and telecommunications tower erection, service and maintenance industry.

Member Benefits

- Climber Training Standard
- Safety Program Guide
- NATE/OSHA National Partnership
- Access to Key Players
- Tower Times Magazine
- Insurance Program
- Strong Voice in Washington
- Safety & Education
- Legal Counsel
- Annual Conference & Exposition
- Registered NATE Logo
- Membership Plaque & Certificate
- Membership List
- Website Link
- Committees & Subcommittees

www.natehome.com

president, said that the number of member companies had grown from five at the initial meeting to 18. "We're growing, and we're not done yet," he said.

The convention focused attention on DAS with conference sessions and a center-stage display in the exhibit hall.

Dixon, market development manager for wireless networks at Corning Cable Systems, said that Forum advocacy during the year included a filing with the Connecticut Public Utilities Commission on pole attachment. "If you're in the game, pole attachments are a continuing issue we seek to solve. When we get the opportunity, we file in support of pole attachment actions that support DAS," he said. "We filed a petition with the FCC to reconsider an order with the Katrina Review Panel that requires each cell site to have eight hours of backup power. It is hard to figure out how to put eight hours of power at the bottom of a light pole."

Dixon said that the Forum provides information to help people make good decisions about the technology.

'Titans of Towers'

Speaking at convention's popular, "Titans of Towers" session, American Tower's Taiclet said that his company has experience with both indoor and outdoor DAS, "but we're cautious because distributed antennas systems are more expensive, and carriers have to pay a higher lease rate to cover the same ground. Indoor makes sense because there is a lot of throughput. In the Florida Mall, they don't have offices or other communications devices. There is a lot of throughput and volume and transient users. Outside, there's less volume, less density, and the economics are different. Indoor today makes sense, and outdoor costs have to come down, and it has to be easier for carriers to integrate. It always has to come back to carrier economics."

Florida Mall DAS tour

Orlando's Florida Mall was the location of an on-site tour of a DAS installation during the convention and the third in a series offered by the DAS Forum.

Global Tower Partners' Ganzi said that DAS has been a critical component of the build-out in San Diego and Los Angeles. "It has become an accidental necessity as part of their network because of deadlines to get on the air. Cricket was more affected in Los Angeles. For the ability to deliver perfect coverage in an industry where coverage patterns are shrinking and search rings are smaller, DAS is a part of our business. Cricket and Metro would tell you that. They wouldn't have met their build-out without DAS for critical pockets."

SBA Communications' Stoops added, "We see DAS through our services side. DAS is here to stay. It is proven technology that has obtained carrier acceptance. It moved from a necessity to a customer choice. There are projects now where they didn't have to choose DAS, but they did. It's another part of the wireless infrastructure system."

PCIA has scheduled its 2008 convention for October 12–15 in Hollywood, Florida, the site of its 2005 convention. agl

ALTERNATIVE TOWER DESIGNS:

THE GOOD THE BAD & THE UGLY

Comparing the advantages and disadvantages of standard monopole designs vs. camouflaged alternatives starts with the RF engineering requirements.

by RICHARD P. BIBY, P.E.

Town councils, zoning committees and siting advisory groups have real concerns about wireless communications sites, such as: pleasing their constituents; maintaining property values; protecting view sheds to preserve the integrity of historic, recreation or tourist areas; and environmental safety and quality. Near the end of the list, usually included in the preface to the local code, is a commitment to wireless coverage that connects the city internally and beyond its borders.

To meet these priorities, municipalities have rewritten their local codes to encourage collocation on existing facilities, prohibit new lattice or guyed towers, restrict exposed monopoles to special use permits and specific districts, and make alternative towers (camouflaged monopoles and concealed structures) not only the path of least resistance, but the path of guided preference.

An RF engineer's priorities are the inverse of those of local authorities. The engineer's job is to design an RF-efficient site with the best coverage and that requires minimum CAPEX and OPEX. The only real benefit of an alternative site is reduced visual impact. An alternative tower has no advantages over an exposed monopole for coverage, efficiency or cost. With an alternative tower site, engineering complexity is increased and performance is reduced. OPEX costs are higher. The number of potential tenants at the site is reduced. CAPEX cost may be multiples of two, three or four times the cost of siting an exposed monopole. Really, the principal advantage of an alternative tower is when the only other option is no site at all. This is when the concealment and camouflage vendors ride to the rescue.

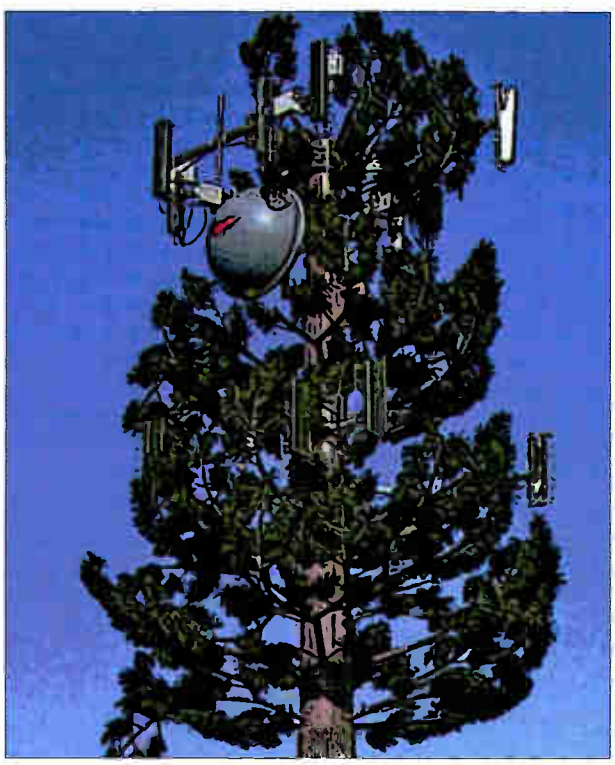
What RF engineers *want*

Here's what an RF engineer usually *wants* (assuming its Christmas):

- 20-foot 'tip to tail' vertical separation between antennas.
- the ability to interleave 800 MHz and 1900 MHz antennas.
- to be at the *top* of the tower.
- no visual impairment between antenna and cellphone.
- to be the *only* carrier on the tower.
- three antennas for cellular or two antennas in the case of PCS.

What RF engineers usually *get* from "Santa" is the "hard candy": vertical separation, absence of visual impairment and the desired number of antennas. What RF engineers often have to *accept* is a "lump of coal," meaning *nothing* on the "Christmas list." If management, attorneys, regulatory affairs, operations and real-estate and zoning considerations dictate otherwise, we'll accept "none of the above" and still attempt to erect the tree with homemade popcorn garlands and construction-paper angels. There are, nevertheless, legitimate RF-engineering justifications for everything on the "wish list."

Separation — The primary reason for a 20-foot tip-to-tail separation is to avoid interference. Physically increasing antenna spacing reduces the amount of energy transferring from one carrier's TX antennas into another carrier's RX antennas. Performance is another factor: A system can receive weaker signals if there is no large source of background noise. Consequently, more antenna separation means better performance, whereby a network would require fewer sites. This means less



Building corners or parapets can work as concealed sites when proper RF materials are used in an aesthetic manner. Steeples or cupolas have minimum visual impact on an historic or scenic area, but they limit the number of carriers and antennas. They also offer little or no vertical separation between antennas. Monopole camouflage has to appear both natural and indigenous to the location of the site. Sites that are only approved if public safety antennas are included as tenants may have to give up more vertical real estate than was anticipated.

effect on the total local view shed for the municipality and reduced CAPEX for the carrier. Most engineers accept the 20-foot rule as an industry standard; however it should be possible to downwardly refine the antenna spacing. Twenty feet seems to be a little conservative. One last point about vertical separation: A frequent "negotiating point" for securing a siting permit is "Our police and fire departments get to have a free ride and be on the tower too." However, given "tip to tail" requirements, you may lose a huge amount of leaseable vertical real estate just because of the large physical size of the antennas that most public-safety systems use.

Interleaving — Likewise, interleaving 800 MHz and 1900 MHz also is desirable to reduce interference. The 800 MHz antennas receive 1900 MHz signals less efficiently than a 1900 MHz receive antenna does, and vice versa. Vertically interleaving 800 MHz and 1900 MHz carriers essentially doubles the separation spacing. So, you want these antennas alternated as you go up a pole.

'Eagle claws' — Why do you want to be at the top of the tower? *Everybody* wants to be at the top of the tower. The higher you are, the better the outward coverage you will have, and consequently you'll need fewer towers.

Thus, in a perfect world, yes, I would want my receive and transmit antennas to be at the top. However, the economics and the business model say if you're going to *get* the prime spot on the tower, you're probably going to be the anchor tenant, your rent is probably going to be a little bit more and you're probably going to end up contributing to the expense to get that site built. So the folks at the top of the tower are usually paying a little more and have usually made that longer-term commitment to the tower, which is why they get the best spot.

Interference and lightning

Usually the top also would be the best spot for reducing interference. However, in urban areas, if you're up high, then you're seeing a lot more cellsites and other radiators, so maybe your interfernce would increase. It's a site-specific call. One other drawback is that the folks at the top of the tower tend to get zapped a little more by lightning, but current lightning-arrestor technology has that situation under better control than it was in the past.

Visual impairment — By "no visual impairment," we mean a clean line-of-site between the transmit antenna on the tower and the mobile phone or other wireless device. Anything that comes between those two is going to require more power of the cellphone to transmit back to the base station, and it's going to require more effective radiated power (ERP) power to transmit out to the cellphone. Obviously, where you've got an ac power supply and a big transmitter, you're not too concerned about cranking that power to transmit out a little bit more, but you still need to be concerned about how much energy the user's cellphone ex-

pends to talk back. The best coverage will result in the longest battery life, which is a concern for carriers. So, as an RF engineer, while I don't like the idea of being in a shared facility where I have a piece of Plexiglas or anything else between my antenna and the rest of the world, I accept it where I must. Realistically, there's not much loss nowadays when proper materials are used for concealed sites. But visual impairment in terms of trees or other buildings proximate to the site is still a large problem. That's why you'll go through the fight to find the site that's "on top of the hill," with no trees. Ironically, visual impairment is not as big an issue in dense, highly populated areas as it is in suburban or rural areas because coverage in dense areas tends to be more limited by call-capacity constraints rather than by line-of-site issues.

'Flying solo' — Motivations for wanting to be the only carrier on a tower are simple: tighter control of site operations, equipment, infrastructure and emissions. Absence of competition also is a factor.

'Three from column A, two from column B' — If you're performing RF engineering for a cellular carrier, you want to have three antennas; in the case of a PCS client, we usually want two antennas. Cellular systems typically have two RX antennas for space receive diversity to overcome fading and one TX, for which no diversity is needed. PCS systems typically have one RX antenna and one TX/RX antenna. Some systems may have a fourth antenna for transmission if the site is heavily loaded.

Making alternative sites work

So, how do these "wish list" considerations get compromised when deploying an alternative site? Designs within other structures may limit the site in terms of numbers of antennas or carriers. From an RF perspective, no matter how good the RF-transparent material is, there will be *some* amount of insertion loss, and this will vary, depending on the frequencies in use. For "fake tree" monopoles, or "monopines," there is the OPEX of ongoing maintenance, which also varies, but will definitely be more than for a site inside a church steeple. Nevertheless, the basic pole structure beneath the faux foliage does give RF engineers what they want in terms of multiple carriers, number of antennas and antenna spacing. However, if the painting, placement of branches (and leaves or needles) and pole wrapping is not smartly done, a tree monopole can be a bit of an eyesore.

There's an appropriate alternative site for every place. Some may not function well in an historic village, but will look—and work—just fine on the side of a highway. The key is to make zoning and permitting deciders aware that the most aesthetic solution is probably not the best engineering solution. Compromise is a two-way street.

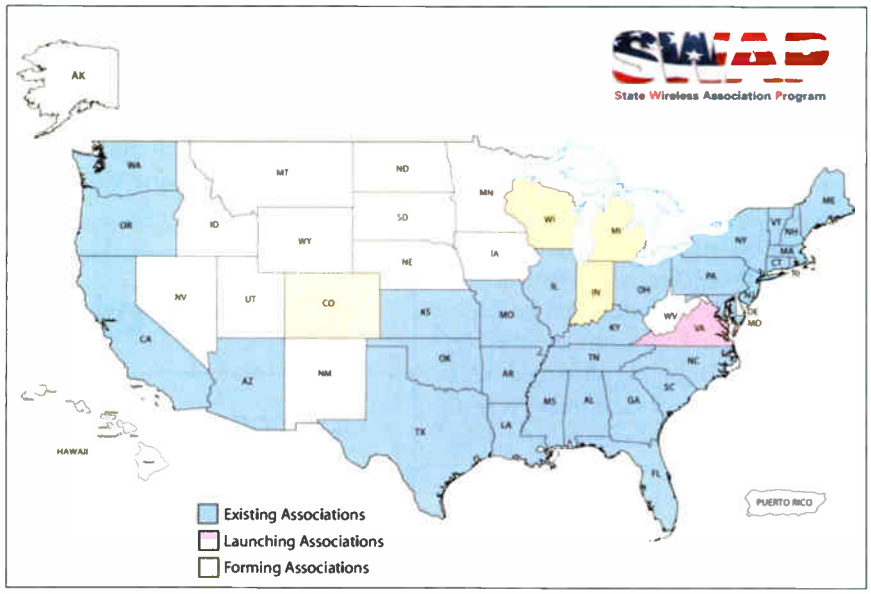
Biby (also publisher of AGL magazine) is co-founder and CTO of Waterford Consultants, Waterford, VA. His email address is *rbiby@agl-mag.com.*

SWAP Forms National Exec. Comm.

by Pat Tant

PCIA in October was once again an exciting and successful show. We will have more information and photos in the next issue and share some of the SWAP events from Orlando.

SWAP is continuing to grow as a national program, and I am pleased that the momentum is strong, with more associations still forming. One of the challenges has been to maintain a central organization for all of the information as well as to meet the needs of this growing endeavor throughout the country. This need has created an opportunity to establish a central voice for all state associations as well as for SWAP—the national program.



PCIA and the leaders of SWAP have recently formed a National SWAP Executive Committee. The purpose of this group is to provide guidance and ensure that local state associations are supported and assistance is offered from a national level. This is a seven-person committee comprising two PCIA staff members (Connie Durcsak and Nancy Chrisman), Hunter Stuart (pioneer of the first state association in Tennessee and national cheerleader for SWAP), three state-association presidents (currently Andy Rotenstreich from Alabama, Doug Dimetroff from New York and Jeff Peters from Texas), and myself as chair of the Committee. Janet Gill, past SWAP National Director, will serve through the end of 2007, after which Nancy Chrisman will assume that position. The three state presidential seats are two-year terms and will be rotated at the end of each term.

Our intent is to have different geographical areas represented among the presidents as well as any expertise and experience that such individuals may bring to a national level.

The Committee first met in February at the Crown Castle International offices in Nashville, TN, to launch our efforts. We will meet quarterly, and task teams have already been assigned during our first few months. The goal and purpose of the group is not only to continue the efforts originally set forth by SWAP in May of 2005, but to strengthen the future of this program. Our next meeting was held June 9 during the second annual Tri-State Joint Meeting in Chattanooga, TN, hosted by the Tennessee, Alabama and Georgia Wireless Associations.

One of the first task items that we have identified and assigned is the SWAP website. PCIA hosts the official site, *www.swaprogram.net*, and it will undergo changes and updates over the next several months. This is an excellent tool for the dissemination of information, calendars of events for both national SWAP and all state associations, press releases, links to other state websites and other valuable information. The executive committee has also implemented SWAP Roundtable Calls, which provide a venue and opportunity for all positions within each state association to come together on a national

(Continued on page 46)

SWAP National Executive Committee Mission Statement:
To implement and execute a national program for the success of the individual state wireless associations and provide one voice for strength and consistence throughout the country.

SWAP
State Wireless Association Program
www.swaprogram.net

Meet: Alabama Wireless Association

by Andy Rotenstreich, AWA President

AWA
...connecting the wireless industry
www.alabamawireless.org

Alabama Wireless Association (AWA)

Meeting Location: Birmingham, AL
Date Formed: 2003
Association Charity:
The Bell Center
President:
Andrew Rotenstreich Haskell
Slaughter Young & Rediker, LLC
Birmingham, Alabama 35203
205.254.1425
nar@hsy.com

President's Message:

I am proud to announce that the Alabama Wireless Association (AWA) has successfully entered its fifth year of existence, and its membership is as strong as ever. Since that first get-together with interested industry representatives in June 2003, the AWA has strived to provide its members with a central forum dealing with thought-provoking issues affecting our industry and a chance for all wireless personnel in Alabama to socialize and to conduct business.

Building on my inspirational visit with the Tennessee Wireless Association in early 2003 and encouragement from my friend, John Hastings, the AWA has met its goals by providing quality educational sessions, joint association leadership, community charitable leadership and a downright good time at our social events.

Since our inception, we have been the recipient of much assistance from PCIA. In particular, the development of the State Wireless Association Program (SWAP) has placed the AWA in the position as a leader and model for other state wireless associations. We look forward to our continued relationship with PCIA and SWAP.

As our fifth year begins, we continue to stay focused on our goals and to work to produce the type of association of which its members can be proud.

Thank you to my board of directors, my hard-working officers and the membership in general, for helping the AWA survive and prosper. We have many exciting events planned for the future, and we look forward to having you share these experiences with us.

Below is our schedule of events, along with our board membership. AWA has an annual set schedule in an effort to not only limit our events but to set forth predetermined meeting dates. **agl**

AWA Board Members

Co-vice Presidents:
Michael Sandifer, *Excell Communications*
Martha Penton, *Damiano Long Consulting*

Secretary:
Rebecca Burns,
Haskell Slaughter Young & Rediker, LLC

Treasurer:
Kevin Harris, *Crafton Communications*

AWA Calendar/Events

March: 1st Quarter Meeting—*Birmingham*

June: Joint Meeting of TN, AL, GA Wireless Associations —*Chattanooga, TN*

September: 3rd Quarter Meeting—*Birmingham,*

October: Annual Charity Golf Tournament —*Birmingham,*

December: 4th Quarter Meeting and Holiday Social —*Birmingham*

SWAP Executive Committee members present at the Tri-State Joint Meeting in Chattanooga, TN, in June (from left): Connie Durcsak, PCIA; Janet Gill, Excell Communications; Andy Rotenstreich, president, Alabama Wireless Association; Doug Dimitroff, president, New York Wireless Association; Pat Tant, Excell Communications; Hunter Stuart, formerly Crown Castle International, now Excell Communications; Jeff Peters, president, Texas Wireless Association.

(Continued from page 44)

conference call twice a year to share ideas and successes, and to offer assistance to newly forming and launching associations. There is a specific conference call for each position: president, vice president, secretary, treasurer and webmaster, and for chairs of the Membership/Social, Regulatory/Legislative and PR/Media committees.

I encourage everyone who holds a position in a state association to participate in these important calls. You will find additional information and the schedule of calls on the SWAP website.

The entire SWAP Executive Committee, as well as hundreds of other local state members throughout the country, is committed to state wireless associations. Our vision is that every state will be involved in an association, and our goal is to continue to help support positive industry awareness. SWAP: enhancing the wireless future. agl

Tant serves the chair of the national SWAP Executive Committee. She is senior vice president of Birmingham, AL-based Excell Communications and Network Partners.

MD state officer addresses inaugural MDDCWA meeting

The Maryland DC Wireless Association ("MDDCWA") launched on Oct. 25, 2007, with an inaugural business luncheon at the Governor Calvert House in Annapolis. Speakers included MDDCWA President David Yacoub, also the president and CEO of Site Link Wireless, Michael Fitch, president and CEO of PCIA—The Wireless Infrastructure Association and keynote speaker David Edgerley, secretary of the Maryland State Department of Business and Economic Development (DBED).

The event attracted over 200 leaders from throughout the wireless and business world in Maryland and the District of Columbia, as well as outside the region from as far away as North Carolina and New York.

Companies that helped found the association, represented at the launch, included Aarcher, Atlantic Risk Management, CMX Engineering, Donohue & Blue, Network Building & Consulting, Site Link Wireless and Smarlink.

"DBED will continue to support this important and diverse industry in its efforts to grow, and we applaud the efforts of the Maryland DC Wireless Association for uniting our wireless community," said Edgerly.

The MDDCWA's principal contact is Sean Hughes, 703-906-0184. Its mail and web addresses are 9099 Ridgefield Drive, Suite 204, Frederick, MD 21701; *www.mddcwa.com*.

Integrated fuel-cell system for extended-run back-up power

The latest product in **IdaTech's** ElectraGen family of fuel-cell systems is specifically designed to meet the back-up power needs of telecommunications, utilities and government applications. Available in 3 kW and 5 kW outputs, the ElectraGen XTi operates on HydroPlus, a fuel mixture of methanol and water chosen for its low reforming temperature, extremely low freezing temperature and industrial availability. The system provides the 48 Vdc back-up power required by telecommunications networks to replace or supplement traditional solutions such as batteries and gensets.
www.idatech.com

L-810 obstruction lights

The RTO Series of LED L-810 obstruction lights from **Dialight** can be operated in steady or flashing mode. They are available as either single or dual FAA compliant fixtures for new installations or as retrofit lamp assemblies with adapters for replacing existing incandescent lights. The shock- and vibration-resistant RTO Series is offered in 120–277 Vac versions. The obstruction lights come with grounding terminals and threaded 1" and ¾" mounting hubs.
www.dialight.com

E-band antennas

A new and optimized version of its low-profile, high-performance two-foot antenna for E-band applications has been announced by **Radio Waves.** The HPLP2-80 offers 52 dBi of gain in a low-profile package. The optimized E-band antenna covers 71.0–86.0 GHz and can be developed with a mounting system to directly integrate to an OEM manufacturer's radio or ODU (outdoor unit).
www.radiowavesinc.com

Two-foot dish for 11 GHz backhaul

Changes to Part 101 Category B (Cat B) specifications will now permit use of two-foot antennas in the 11 GHz band. The RFS CompactLine two-foot antenna (SB2-107) from **Radio Frequency Sysyems** is designed for advantages in gain, weight, tower wind-loading and overall depth. The CompactLine SB2-107 antenna includes a robust mechanical design and lightweight construction from corrosion-resistant materials.
www.rfsworld.com

'Big 3' report 3Q '07 results, '08 outlook

The "Big 3" publicly traded tower companies reported out their results for the third quarter of 2008 at the end of October and beginning of November. Statements which accompanied the financial reporting continued the general tone of optimism voiced by the companies since their number began dwindling, through mergers, from five public companies operating at the beginning of 2005 to the present three.

Crown Castle International

Houston-based Crown Castle International (NYSE:CCI), which acquired the competitor tower consolidator Global Signal on Jan. 12, reported "another solid quarter" for the period ending Sept. 30, John P. Kelly, president and CEO, said. The quarter exceeded "the midpoint of our third-quarter outlook for site-rental revenue, site-rental gross margin, adjusted EBITDA and recurring cash flow," he said.

Ben Moreland, Crown's CFO, added: "Our full-year 2008 outlook suggests approximately 25 percent year-over-year growth in recurring cash flow per share, which is at the high end of our previously stated annual growth goal of 20 to 25 percent."

During the third quarter of 2007, Crown Castle invested $66.3 million in capital expenditures. These expenditures included of $5.6 million of sustaining capital expenditures and $60.7 million of revenue-generating capital expenditures, of which $34.7 million was spent on land purchases, $10.9 million on existing sites and $15.1 million on the construction of new sites.

For the fourth quarter, Crown is expecting rental-site revenue in a range from $333 million to $338 million. For the full year of 2007, the company expects rental-site revenue of about $1.285 billion and for 2008 that its revenue will increase by about $100 million.

"Our well-located assets, industry-leading customer service and efficient capital structure will create short- and long-term value for our shareholders," Kelly said.

Crown owns, operates and manages more than 22,000 wireless communications sites in the United States and another 1,400 in Australia.

SBA Communications

Boca Raton, FL-based SBA Communications (Nasdaq:SBAC) "delivered another strong quarter," said Jeffrey A. Stoops, president and CEO. He said SBA's wireless carrier customers were more active in the third quarter compared to the first half of 2007.

"We enjoyed our strongest lease-up quarter in over two years. Third-quarter lease-up will be partially reflected in our fourth-quarter financial results and fully reflected in our 2008 results," Stoops said. "Our customers continue to remain very active, at an elevated pace compared to the first half of 2007, and we expect they will continue to remain very active through the end of this year and into 2008."

Stoops said that SBA expects to exceed its portfolio growth goals for 2007 and expects to grow its portfolio by 5 to 10 percent or more in 2008.

"Our focus on organic growth, portfolio growth and capital structure is working well, and we achieved our overall goal of material growth in equity-free cash flow per share," Stoops said. "We feel very good about 2008. Our 2008 guidance calls for an acceleration of growth in leasing revenue, tower cash flow and adjusted EBITDA. We expect to once again achieve material growth in equity-free cash flow per share in 2008," he said.

During the third quarter of 2007, SBA purchased 227 towers and built 17 towers, and as of Sept. 30, the company owned 6,026 towers.

For the full year of 2007, SBA expects site-leasing revenue of $321 million. In 2008, the company expects revenue to grow by about $44 million.

American Tower

Third-quarter results for Boston-based American Tower (NYSE:AMT) included an announcement that the company has hired Steven Marshall, lately of National Grid Wireless, as executive vice president for international business development. At National Grid, Marshall led the company's operational and business-development efforts in Latin America, India, Southeast Asia, Africa and the Middle East.

About those third-quarter results, Jim Taiclet, American's CEO, said that demand for tower space enabled the company to deliver double-digit revenue and adjusted EBITDA growth.

"We expect a strong finish for the year, as reflected in our increased 2007 guidance for tower revenue, and anticipate that the favorable leasing environment will extend through 2008," Taiclet said.

For the quarter, American's revenue increased 10 percent to $367.6 million. Its adjusted EBITDA increased 14 percent to $248.6 million. Cash provided by operating activities totaled $181.6 million. The company's net income was $59.6 million, inclusive of a $41.7 million income-tax benefit.

American projected its full-year 2007 rental and management-segment revenue at about $1.417 billion and forecast that it would increase in 2008 by about $100 million.

"We still seek to add high-quality assets to our portfolio while maintaining our track record of investment discipline, both in the United States and in selected high-growth markets abroad. At the same time, our generation of significant cash from operations and rising, adjusted EBITDA enables American Tower to continue our substantial share repurchase program," Taiclet said.

American Tower, which acquired competitor SpectraSite in May 2005, owns and operates 22,500 sites in the United States, Mexico and Brazil. The company manages 2,000 revenue-producing rooftop and tower sites. agl

TOWERCOS

Memphis, TN-based **Tower Ventures,** a national provider of wireless-communications structures, has acquired 338 towers that will be marketed to wireless and broadband carriers.

"The acquisition takes Tower Ventures from its traditional role as a regional tower owner to a national player in the wireless-infrastructure business" said company President Billy Orgel.

Tower Ventures' complete portfolio includes 400 sites in 22 states across the United States. Tower Ventures covers all aspects of the wireless industry from site development and acquisition to leasing and management. Its staff also deals with issues of zoning, local policies and ordinances.

Austin, TX-based **KGI,** a marketing and licensing firm for the wireless industry, has finalized agreements to promote 400 CitySwitch towers, 300 towers for Alltel's Midwest Wireless and 15 Gulf States Towers sites.

KGI also completed a comprehensive marketing audit for 360 Adelphia cable towers, identifying new collocation revenue opportunities for KGI's client, Time Warner Cable.

The addition of this new tower inventory puts the portfolio of the 10-year-old company at about 10,000 towers and other sites, representing more than $2 billion worth of radio-tower assets for wireless carriers and cable companies.

KGI markets and licenses land, building, railway right-of-way and tower sites for Alltel Communications, Charter Communications, CitySwitch, Gulf States Towers, Mediacom Communications, National Cable Television Cooperative and Time Warner Cable. KGI said its sites cover 80 percent of the major wireless markets in 3,600 cities and 48 states.

SITING NEWS

As discussed in a wireless case study released in October by Long Beach, CA-based Channel Law Group, **Sprint Spectrum** and a Pennsylvania local volunteer fire department jointly applied to a Pennsylvania municipality for zoning permits for the construction of a 130-foot tall monopole in a residential neighborhood.

The joint application sought a variance to exceed a 15-foot height restriction in the zone. The site was desired to locate antennas for the fire department's emergency radio system and for Sprint's PCS antennas.

The **Upper Chichester Township, PA,** Zoning Hearing Board denied the permits, citing concerns about decreased property values, incompatibility with a residential neighborhood and the availability of other sites to meet coverage gaps. The board refused to recognize the application as a joint project with the fire department, instead treating the application as solely a commercial wireless communication facility.

Sprint and the fire department brought suit in federal court arguing that the denial violated the 1996 Telecommunications Act. The district court agreed and ordered the municipality to issue all zoning permits within 30 days.

Nevertheless, the municipality refused to issue the building permits for the facility. Sprint and the fire department returned to court and sought an injunction, and the court agreed. The municipality appealed both orders.

On Oct. 4, the Third Circuit Court of Appeals affirmed the district court's rulings, and ordered the municipality to issue zoning and building permits. The court refused to accept the municipality's argument that the monopole was solely a "commercial" wireless service communication facility subject to a higher standard of review. Instead, the court focused on the emergency-services component of the facility, including the emergency communications characteristics of the services provided by Sprint.

In its ruling, the Third Circuit said, "We look upon redundancy in this age, particularly after 9/11, as critical to emergency operations. As a result, we have taken action with regard to further alerting people through our cellphones and regular pagers—in addition to fire pagers, which we found to be inadequate in certain areas. So communications is definitely associated with any emergency service."

The court also held that residents' aesthetic and property value claims were insufficient because they were not backed up by evidence and lacked documentation. The court also rejected the municipality's argument that the district court could not order it to issue a building permit. The court said that such an approach would effectively allow an "end run" around the requirements of the Telecom Act and allow local regulatory agencies to subvert federal policy by elevating local zoning authority over Congress.

BUSINESS BRIEFS

Overland Park, KS-based **Black & Veatch,** an international engineering, consulting and construction company, has acquired Chicago-based **Richard Connor Riley & Associates** (RCR), a provider of real-estate, legal and lease-management services for the wireless telecommunications industry.

RCR employs about 55 professionals who are joining Black & Veatch as part of the company's Telecommunications Division, which provides site-development services to the wireless industry as well as to private and public water and energy utilities.

Black & Veatch said its acquisition of RCR will enhance and expand the range of wireless site development business the company offers. RCR's expertise includes site acquisition, title reviews, zoning, permitting, right-of-way procurement and lease administration. RCR's business activity will be integrated with Black & Veatch's work

in project management and execution, architecture and engineering, material procurement, construction management, construction, installation and commissioning services.

"The addition of RCR's wide-ranging site-acquisition and lease-administration services to Black & Veatch's turnkey site-development expertise provides us with a complete solution set unique to the industry," said Marty Travers, president of Black & Veatch's Telecommunications Division. "It creates one company that can self-perform the development of a site from site acquisition through commissioning."

Wallingford, CT-based **Times Microwave Systems** (TMS) announced price increases for many items in its LMR line of cables, connectors and accessories became effective Oct. 31. TMS cited increases in material costs for metals and petrochemicals used in the manufacturing of the products as reasons requiring the price increase.

The Boulder, CO-based wireless communications architecture-and-engineering firm **BCI Wireless** and its affiliate Structural Components, supplier of tower and monopole reinforcement products, have hired **Dennis Abel** as senior structural engineer. Abel has over 13 years of experience in the tower industry and is licensed as a professional engineer in 35 states.

Abel started his career with Pirod, where he led the tower-analysis group and analyzed towers, poles, mounts and foundations. Most recently he was chief engineer at Nello, overseeing the engineering department, development of the tower and monopole product lines, and building the engineering systems.

In his new position, Abel will develop new products, analyze tower and monopole structures and oversee day-to-day operations of the BCI Wireless engineering department.

Hunter Stuart has joined Birmingham, AL-based **Excell Communications** and **Network Partners** as director of operations for both firms. Stewart is an industry veteran with 13 years of wireless experience with both a carrier and a national infrastructure provider.

Stewart was previously director of national site development for Crown Castle International.

The founding president of the Tennessee Wireless Association, Stuart will continue his work with that organization and the State Wireless Association Program national program, for which he serves on the SWAP National Executive Committee.

King of Prussia, PA-based **WeiTel,** a nationwide provider of design-and-build services for the wireless industry, has announced the appointment of **Stephen Skoufalos** as account executive. Skoufalos will represent WeiTel in the development of new account relationships as well as broadening existing relationships across North America.

Skoufalos joins WeiTel from Thomas & Betts, Memphis, TN, where he most recently served as director of marketing for the CATV and security markets. He previously served as national sales manager for Tollgrade Communications. He has also held sales and management positions with Tektronix, Supply Performance Testers and Alpha Technologies.

Greenville, NC-based **LBA Group** is among those companies placed on the first list compiled by ***Inc.* magazine** of the top 5,000 fastest-growing U.S. businesses. LBA Group ranked 3,613 with a three-year sales growth of 80 percent.

"We are honored to be recognized among the cream of U.S. small businesses," Lawrence Behr, CEO of LBA Group, said. "We attribute our success and this notable achievement to the positive attitude, talent and aggressive bent of our employees."

LBA Group is a CMSDC-certified small disadvantaged Hispanic business. Since 1963, LBA Group and its core companies, Lawrence Behr Associates and LBA Technology, have provided consulting and manufacturing services for broadcasting, radio-frequency users and the wireless telecommunications industry. Its antenna products are used by broadcasters and governments worldwide.

Lawrence Behr Associates provides consulting, test, project-management and design services for communications-system coverage, interference and

compatibility matters, electromagnetic shielding, radio-frequency safety and collocation of diverse communications facilities.

LBA Technology designs and manufactures antenna tuning and coupling systems, as well as transmission system integration, for the low-, medium- and high-frequency radio-frequency bands at power levels to 1 million W.

REGULATORY

On Oct. 4 the FCC released its *Order on Reconsideration* issued in response to requests for reconsideration of its June 8 *Order* requiring back-up power sources for sites operated by local exchange carriers (LECs) and commercial mobile radio service (CMRS) providers.

In the new *Order*, the FCC was generally adamant about its decision to require LECs and CMRS providers to have an emergency backup power source for all assets that are normally powered from local AC commercial power. The FCC did add exemptions for instances in which compliance is precluded by law; risk to safety of life or health; or private legal obligation or agreement.

FCC attorney, **Frank Stilwell,** 50, died on Oct. 24, 2007. A senior attorney with the Spectrum and Competition Policy Division of the Wireless Telecommunications Bureau, Stilwell handled cell-tower siting and NEPA/NHPA issues. He worked with consultants, SHPOs, the tower industry and the ACHP on tower sitings, particularly sites affected by the Nationwide Programmatic Agreement.

Stilwell earned his Political Science degree from Ohio's Wright State University and his law degree from Georgetown University School of Law, Washington. He was a member of the Virginia, Maryland and DC bar associations, and also a ham radio enthusiast.

WORKPLACE FATALITIES

Daniel Plants, 51, of Triadelphia, WV, was found dead on Sept. 24 at the base of a broadcast tower he was dismantling in East Deer Township, about 15 miles northeast of Pittsburgh. Plants apparently had been working alone on the deconstruction of a 225-foot tower that had been reduced thus far to a height of about 170 feet.

Because there were no eyewitnesses to the fall, it is unknown from what height Plants fell. First responders called when the body was discovered indicated that Plants was wearing personal safety equipment, but they could not determine whether it had been attached to the tower at the time of the accident.

Plants had been working with his sons to maintain an adjacent 450-foot tower and to dismantle the 225-foot tower, both owned by WGBN-AM. The shorter tower had been damaged during a storm earlier this year. agl

Find a Site!

Use Our Online Vertical Assest Search Tool!

WELCOME to TOWER SOURCE!

Tower Source is your comprehensive resource for locating, listing, and marketing available sites for lease throughout the United States. Tower Source specializes in the management of municipal governments' and independently owned utilities' vertical assets. Tower Source can identify and list available vertical assets and market those sites to both traditional and non-traditional service providers. The Tower Source on-line vertical asset search tool is a cost effective project tool to complete your analysis of available locations for site deployments.

Call today: (610) 284-9289

TOWERSOURCE

Your authoritative and comprehensive source of tower data and market analysis

www.towersource.com

Enforcement

AGL provides this periodic list of notices and fines issued by the FCC to remind you of regulated construction, operations and maintenance issues associated with antenna structures. (Note: Some fines listed may include additional non-tower-related infractions, not shown here.)

Selected FCC Enforcement Bureau Orders and Field Actions for June–October, 2007

Company/Owner	EB Action*	Date	Section	Rules Violation	Fin
Grandview Development; Central Islip, NY	NOV	06-04-07	17.23	Failure to comply, FAA painting/lighting recommendations	NOV
Petra Cablevision; Central Islip, NY	NOV	06-04-07	17.50	Antenna structure cleaning and painting	NOV
American Towers; Ashland, OR	NOV	06-04-07	17.4(g)	ASR# illegible; failure to use weather-resistant materials	NOV
M.R.S. Ventures/WDSK-AM; Cleveland, MS	FO	06-06-07	73.49	Failure to enclose AM tower within effective locked fence	$7,000
NJ State Turnpike Authority; Deptford Twnshp., NJ	NOV	06-07-07	17.57	Failure to report structure completion & phone# change	NOV
Multicultural Radio Broadcasting; Cutler, CA	FO	06-11-07	17.51(a)	Time when lights should be exhibited	$10,000
New Cingular Wireless PCS; North Caldwell, NJ	NOV	06-12-07	17.23	Incorrect application of FAA marking and lighting	NOV
Jason Konarz/WQMA-AM; Marks, MS	FO	06-13-07	73.49	Failure to enclose AM tower within effective locked fence	$7,000
Omnicom Tower Limited; Woodward, OK	NAL	06-12-07	17.47(a) 17.57	Failure to observe or monitor lights on a daily basis Failure to update tower ownership/contact information	$5,000
Alfred Plascencia/ Lazer Broadcasting/KOXR-AM; Oxnard, CA	NAL	06-19-07	17.47(a) 17.57 17.48	Failure to observe or monitor lights on a daily basis Failure to update tower ownership/contact information Failure to notify of extinguished or malfunctioning lights	$5,000
Subcarrier Communications; Phoenix, MD	NOV	07-18-07	17.4(g) 17.23	Failure to display Antenna Structure Registration # Failure to update painting/lighting after structure alteration	NOV
Long Island Multimedia; Islip, NY	NOV	07-16-07	17.50	Antenna structure cleaning and painting	NOV
KUET License Company; Black Canyon City, AZ	NOV	07-25-07	17.57	Failure to use Form 854 to notify change in height; Non-compliance with painting/lighting specifications for height	NOV
Triangle Construction Profit Sharing Plan; Sun City, AZ	NOV	07-25-07	17.4(g) 17.50	Failure to display Antenna Structure Registration # Antenna structure cleaning and painting	NOV
Time Warner/Advance Newhouse; Medina, NY	NOV	07-26-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Radio Plus/WFDL-AM; Waupun, WI	NAL	07-27-07	73.49	Failure to enclose AM tower within effective locked fence	$7,000
Brahmin Broadcasting/KRAE-AM; Cheyenne, WY	NAL	07-31-07	73.49	Failure to enclose AM tower within effective locked fence	$7,000
Maranatha Investment Partnership; Grand Junction, CO	NAL	07-31-07	17.57	Failure to report change of ownership information	$3,000
Sprint Telephony PCS, L.P.; Banning, CA	NAL	08-07-07	17.23	Failure to comply with FAA lighting recommendations	$10,000

Company/Owner	EB Action*	Date	Section	Rules Violation	Fine
Omnicom Tower Limited; Woodward, OK	FO	08-15-07	17.47(a) 17.57	Failure to observe or monitor lights on a daily basis Failure to update tower ownership/contact information	$5,000
M.R.S. Ventures/WDSK-AM; Cleveland, MS	MO&O	08-16-07	73.49	Failure to enclose AM tower within effective locked fence	$7,000
Pinnacle Towers LLC; Canonsburg, PA	NOV	08-21-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Waldec Enterprises; Anchorage, AK	NOV	08-30-07	17.23	Failure to comply with FAA lighting recommendations	NOV
Pereira Broadcasting/KIGS-AM; Hanford CA	FO	09-07-07	73.49	Failure to enclose AM tower within effective locked fence	$2,800
Ondas De Vida Inc.; Station K205DZ	NOV	09-12-07	74.751(b)	Failure to apply for change in antenna orientation	NOV
County of Suffolk, NY; Yaphank, NY	NOV	09-13-07	17.21	Failure to conform with FAA lighting recommendations	NOV
Delta Radio Greenville/WROX-AM; Clarksdale, MS	MO&O	09-17-07	73.49	Failure to enclose AM tower within effective locked fence	$12,000
First Media Radio/WCPA-AM; Clearfield, PA	NOV	09-20-07	17.57 17.4(g)	Failure to report change of ownership information Failure to display Antenna Structure Registration #	NOV
Mid American Energy; Sioux City, IA	NOV	09-20-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Threshold Communications/KVIN-AM; Waterford, CA	NAL	09-28-07	17.51(a) 17.47(a) 17.48	Time when lights should be exhibited Failure to observe or monitor lights on a daily basis Failure to notify of extinguished or malfunctioning lights	$10,000
Poor Investment Enterprises; Mount Airy, MD	NOV	09-24-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Pamal Broadcasting; Port Ewen, NY	NOV	09-24-07	17.57	Failure to report change of ownership information	NOV
Time Warner/Advance Newhouse; Walden, NY	NOV	09-24-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Global Crossing North American Networks; Wawarsing, NY	NOV	09-24-07	17.57	Failure to notify FCC of antenna structure dismantlement	NOV
Roman Catholic Diocese of Rockville Centre/ dba Telicare; Uniondale, NY	NOV	09-27-07	17.50	Antenna structure cleaning and painting	NOV
Alascom; Harding Lake, AK	NOV	10-05-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Creative Electronics, Oneonta, NY	NOV	10-10-07	17.50	Antenna structure cleaning and painting	NOV
Watermark Communications; Monticello, NY	NOV	10-10-07	17.57	Failure to report change of ownership information	NOV
Peak Broadcasting; Show Low, AZ	NOV	10-17-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Navaho Broadcasting/KDJI-AM; Holbrook, AZ	NOV	10-17-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Smith Bagley Inc.; Show Low, AZ	NOV	10-17-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Industrial Electronics; Williamsport, PA	NOV	10-18-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV
Bald Eagle Repeater Assocation; South Williamsport, PA	NOV	10-18-07	17.4(g)	Failure to display Antenna Structure Registration #	NOV

*NOV (Notice of Violation); NAL (Notice of Apparent Liability for Enforcement); FO (Forfeiture Order); MO&O (Memorandum Opinion and Order)

AGL brings you the news—even faster

Some of you might have already received something new in your email inbox before this issue of AGL arrived.

The rest of you are going to *want* it.

Starting in November, Biby Publishing is launching a new, semi-monthly email newletter, the **AGL Bulletin,** to keep you better informed about events in the antenna-siting industry.

The newletter will cover association news, with particular attention to PCIA and SWAP, business transactions, regulatory affairs, siting and zoning actions at the local level, and events to mark on your calendar.

The AGL Bulletin will help us keep you informed more rapidly about current events than we can accomplish with our regular print issues. It will also allow us to expand our feature articles and columns space in this magazine to provide you with more in-depth coverage.

To receive the free AGL Bulletin, visit *www.agl-mag.com/signup*. agl

Correction:

In Julia Custer's "On the Green" environmental column in the October issue of AGL (page 22, "Fuel-spill Plans: The Clock is Ticking"), the deadline for facilities to get in compliance on Spill Prevention, Control and Countermeasures (SPCC) should have read *July 1, 2009*, not Oct.31, 2007.

In May 2007, the Environmental Protection Agency finalized SPCC rule amendments to *extend* the deadline for SPCC plans. The deadline for preparation of an SPCC plan was extended to mid-2009.

As the regulation now stands, an SPCC-subject facility in operation prior to August 2002 must update and implement its plan *no later than* July 1, 2009. An SPCC facility that does not have a plan in full compliance with *40 CFR 112* and that was in operation prior to August 2002 will be in violation of SPCC plan requirements. New facilities subject to SPCC regulations must prepare and implement a plan before becoming operational. agl

(Continued from page 16)
by FCC employees is a violation of Part 19.735-203 and subject to disciplinary action under Part 19.735-107—as well as other possible legal penalties.

FCC rules also prohibit "stakeholders" from lobbying the FCC after an agenda is published. So, anyone with advance knowledge about which horses are scheduled to run—er, I mean which rules are scheduled for a vote—would have the inside track about the most propitious time to present an ex parte (off-the-record) argument to the FCC. Those not "in the know" get left in the mud—instead of having a dry and level track.

Commenting on the GAO's findings at his behest, Markey noted that, "The *good* news is that the FCC has rules against disclosing inside information before everyone knows it publicly. The *bad* news is that it appears violations of such rules are a daily reality at the FCC.

"I believe the FCC should take immediate steps to protect the integrity of its rulemaking process. The public deserves to know that these decisions are made on the up-and-up, with no unfair advantage to any one side in these important policy debates," Markey said.

Information presented to the FCC during comment periods and ex parte conferences *does* greatly influence rulemaking decisions. There is a simple reason (as the FCC freely confirmed to the GAO—and many of us knew anyway): The FCC usually does not conduct its *own* studies to support (*or* deny) rulemakings. By contrast, the FAA and FDA undertake regulatory studies all the time. (An exception at the FCC would be occasional technical studies by the Office of Engineering and Technology.) Rather, the FCC relies on the industry and the public to *provide* it with information, placed into the public comment record or communicated ex parte. Once this horse-heap of fact and opinion is collected, the FCC staff analyzes it and makes rulemaking recommendations to the Commission, which—*sometime* thereafter—*rules* (or not).

So, knowing *when* to place your bet would increase your odds of a payoff—which is why it's against the rules. Payoffs... hmmm. Is filthy lucre being exchanged for these racehorse-tout tidbits of information? The GAO gave no such indication, and I'd say—probably not. More likely is "inside the Beltway" camaraderie. Employees at the Portals who see DC-based attorneys, lobbyists or other "stakeholder" representatives weekly—or daily—will, by nature, become friendly or chatty. Anyone who works in government, at one time or another, is probably tempted to chant, "I-know-something-you-don't-know."

However, the quickest cure for that syndrome is a brisk trip down the hall to the gaming commissioner's office (i.e., the FCC Inspector General). Our industry *might* gain an occasional advantage from loose lips, but *confidence* in ethical government is the legitimate "Big Con"—a precious commodity to count on over the long mile run. **agl**

Alliance ..... page 25
Allstate Tower ..... page 54
AM Coordination ..... page 58
Andrew ..... pages 35, 42
Atlantic Risk Mgmt. ..... inside front cover
Biby Publishing ..... pages 12, 55, 56, 58
CDMI ..... page 13
ComTrain ..... page 50
Dynamic Environmental Assoc. ..... page 15
Elk River ..... page 51
Engineered Endeavors ..... page 21
Excell Communications ..... page 58
FarLight ..... page 49
Flash Technology ..... page 17
Hark Tower Systems ..... page 34
Higgs Law Group ..... page 58
ITL ..... page 13
Lawrence Behr Associates ..... page 6
Lyle ..... pages 9, 11
Media Venture Partners ..... page 7
NATE ..... page 38
Nello ..... page 54
PCIA ..... page 59
Peabody Engineering ..... page 39
Pendulum/XL Microwave ..... page 6
PolyPhaser ..... page 20
Radio Waves ..... page 46
RCC Consultants ..... page 50
Subcarrier Communications ..... back cover
Telewave ..... page 5
Tessco Technologies ..... pages 35, 42, 57
Tower Source ..... page 53
Utility Service Communications ..... page 14
Valmont Structures ..... page 43
Waterford Consultants ..... page 52
Wireless Capital Partners ..... page 55
Wireless Solutions ..... page 35

professional directory

PCIA

is the Wireless Infrastructure Association.

We invite you to join more than 100 leading organizations - the tower companies, carriers and service providers that are the backbone of the wireless industry.

Member Benefits Include:

- Regulatory Support
- Education Programs
- Best Practices
- Industry Resources
- Networking Opportunities

To learn more about PCIA, contact:
Nancy Chrisman, Director, SWAP and Membership 800-759-0300 x.7492
nancy.chrisman@pcia.com

PCIA™
The Wireless Infrastructure Association

Enabling the Wireless Future.