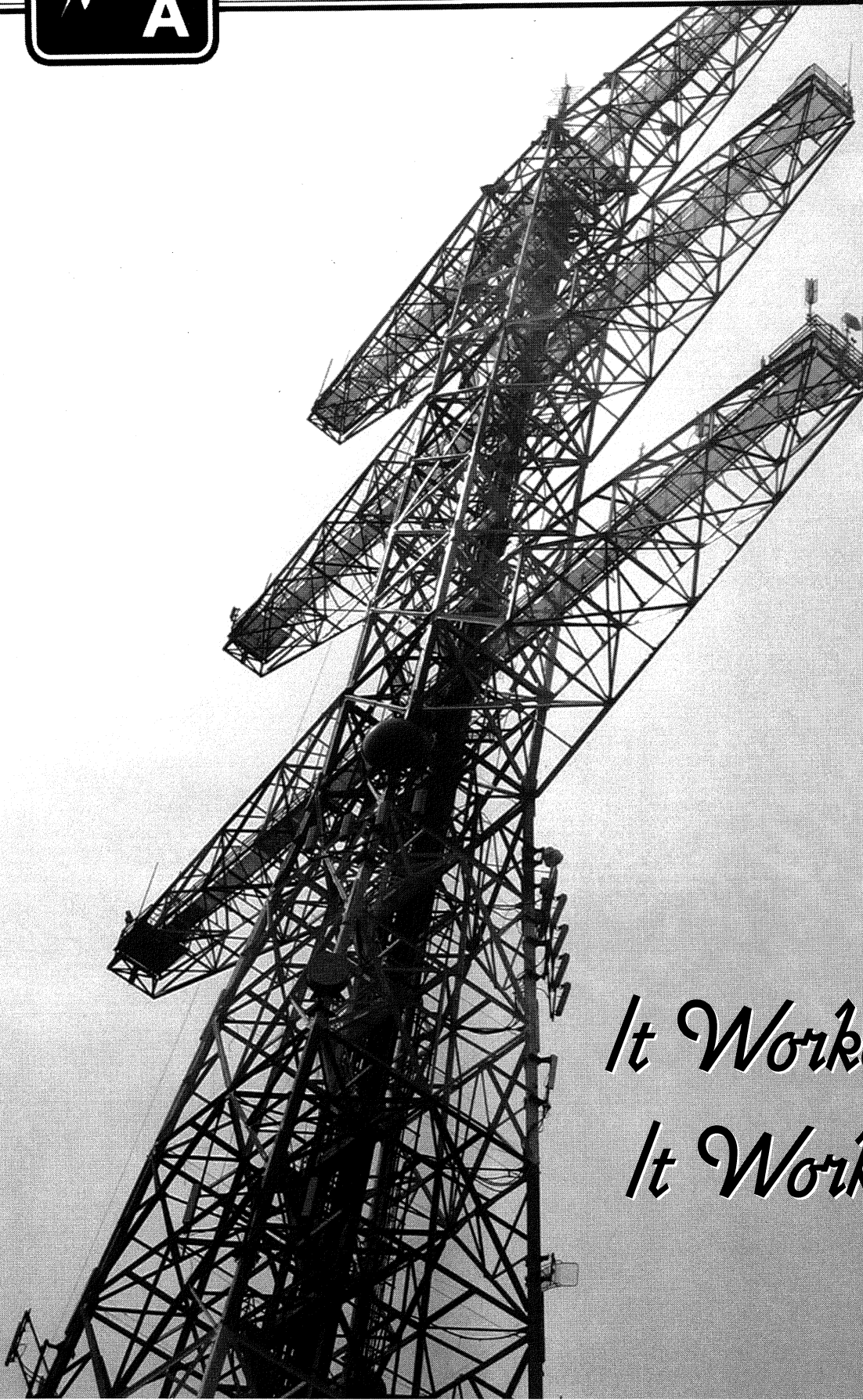


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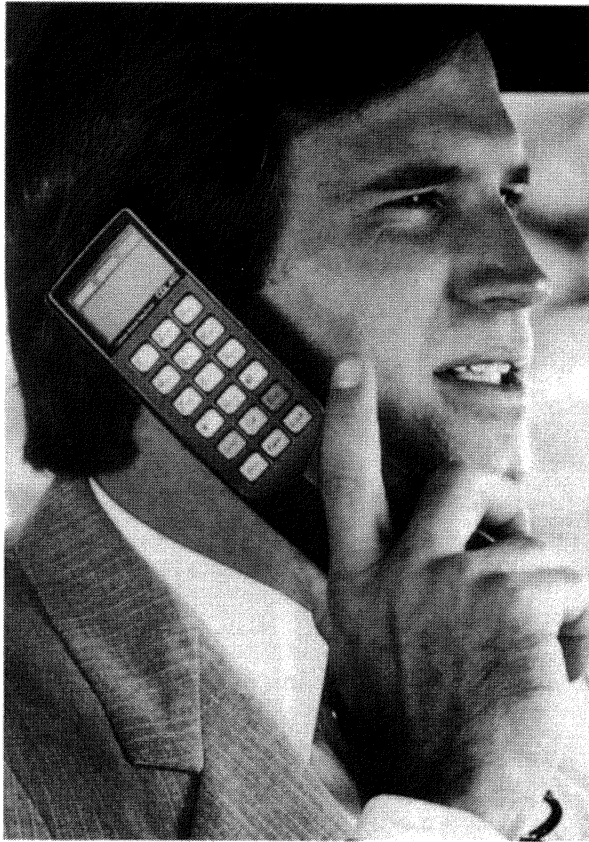
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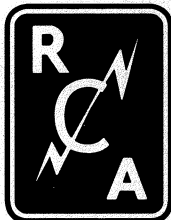
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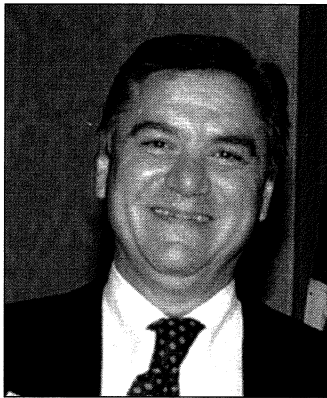
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A Message From Tony

I was trying to come up with an appropriate topic to write about for this issue, so I asked our editor, Debra Wayne, if she had any suggestions. She pointed me in the direction of emergency preparedness and communications post-Hurricane Katrina. What a timely subject, given the loss of life and destruction of property that has happened. The role wireless communication plays in such a situation may not be obvious to most people. This valuable resource is critical, and should never be taken for granted. That was one of the reasons that the founding members of The Radio Club of America were willing to go to Washington D.C., and defend their access to the airwaves almost a hundred years ago.

Let's start with what you, I and most everyone else around the world saw. The scenes we watched on TV, as the news crews delivered live the first glimpses of the power and fury delivered by Katrina, were relayed from the field via wireless. Many of the broadcasters use satellites or microwave towers to beam their transmissions back to their headquarters. With most of the cabled and wired communications infrastructure destroyed or without power and under water, it's natural that they turn to using good old reliable wireless communications. In the case of the broadcasters, it is high-tech, and maybe not so old. In fact, I think broadcasters may have been better-equipped than many emergency responders were at that point. Where would newsgathering today be without wireless?

There is something about how Mother Nature has a way of driving man back to basics. Operating off of batteries, portable generators and vehicle electrical systems for a source of power, a patchwork system of wireless communications was established in the U.S. Gulf Coast region. We hear reports of how volunteer

amateur radio operators — many with the American Radio Relay League (ARRL), working in co-operation with the Red Cross and the Salvation Army — helped to relay the location of people stranded on their rooftops in New Orleans back to emergency personnel. Their delivery to a safe place was aided by wireless.

Emergency responders and public-safety professionals responded from all over the country in an effort to help. Many brought their own vehicles and radio communication systems with them. It makes one proud to see the heartwarming and generous response from our countrymen. With all of the varied local, state and federal agencies onsite, interagency communications became the critical challenge. After 9/11, it was determined that communication failures were one of the major contributors to the loss of life.

While I am writing this, the impact the lack of compatible interagency wireless communications is yet to be determined. I can only guess how dependent the rescue efforts are on their wireless communications and how much better they could be if they were all somehow wireless compatible. I know organizations like the Association of Public-Safety Communications Officials International (APCO) have made great strides in getting standards established for public-safety radio communications but it takes lots of money to upgrade those systems. Wireless to the rescue once again.

I was taught that when something goes wrong, you have to ask yourself "what can I learn from this?" Maybe one of the very important lessons Hurricane Katrina will teach us is: Be better prepared to communicate the next time.

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Everyone Needs To Be An 'Elmer'

Michael Wilhelm, chief of the Public Safety and Critical Infrastructure Division of the Federal Communications Commission's Wireless Telecommunications Bureau, briefed attendees on lawyers, engineers and how the industry needs more of them.

There are so many people here whose work I respect that I'm honored to be here today. When Ray [Trott] called me and set up the travel arrangements, I told my deputy I would be speaking to a club founded in 1903. My deputy asked me, "So you were a *charter member*?" He's now working [elsewhere].

My particular field is in wireless. I'm going to deal this morning with the technical side of some recent proceedings. I don't think people appreciate how much engineering goes into our orders. It is central to my division because we do a lot of technical work.

We have lawyers who also are engineers. We have engineers who are great lawyers, especially those who have been there for years and can recite rules

from memory; they just don't have a law degree. They can write parts of the orders like lawyers. We're grateful for the engineering skill in our division.

Some of the proceedings are so important from a technical standpoint. One is the 800 MHz proceeding. We have every range of opinion from engineering on what needed to be done and what did not need to be done. Finally, it came to a consensus. That's remarkable. A lot of what you do is based on consensus.

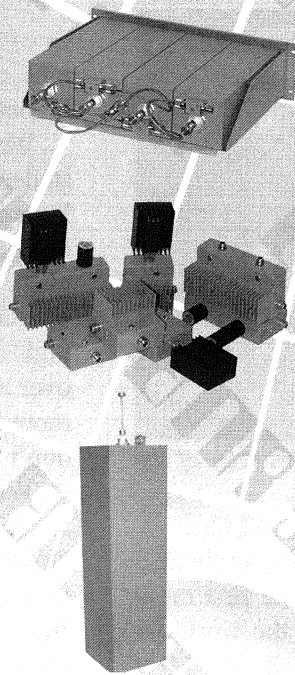
Take Project 25, for example, or the National Coordination Committee. It was remarkable to see divergent opinions from engineers ending up in an agreement. You do that in IEEE and, when you compare it with other decision-making, for example, like legislation, it's remarkable to reach a consensus.



Even this early in the morning, a good breakfast put (L-R) Stan Reubenstein, Stephen Meer and Alan Armitage in the mood for good conversation and shared experiences.

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Dan Smith and keynote speaker Michael Wilhelm of the FCC enjoy the breakfast program in Denver.

I mentioned the NCC. That was a complicated process. We eventually ended up with the first radio band in the country — and, I suspect, the world — that is interoperable. You cannot buy a 700 MHz radio that doesn't work on interoperable channels. It is so important for state, federal and local users. We're going to try to do it on other bands.

Another example of some other skilled engineering decision-making was the 4.9 GHz proceeding. The consensus decision-making there benefits public safety. You came up with a set of standards that allows the manufacturers of off-the-shelf equipment from adjacent bands, with a few modifications, to make equipment for 4.9 GHz. What's significant is that something that normally would require a \$1,000 or a \$2,000 specialized radio can take the equivalent of cards for laptops for \$150. The 4.9 GHz band will proliferate for that reason. It comes within the tight budgets of public-safety organizations.

The \$1 Million Decision

Most of you, I think, climbed the engineering ladder. You have a background in math, science and, sometimes, language. If you look behind, the young people coming up lack that foundation. My daughter is a middle-school teacher in Florida. She has a scientific background, not an education background. She has to teach students remedial reading and math so they can understand concepts of science. That's not unusual. It is occurring in schools nationwide.

Bill Gates spoke to a governors' conference and cited amazing statistics. We are now the country with the highest dropout rate in the world; these kids don't finish high school. Those who don't finish or don't go to college earn, on average, \$25,000 a year. If you have a family, that's near the poverty level. As a mat-

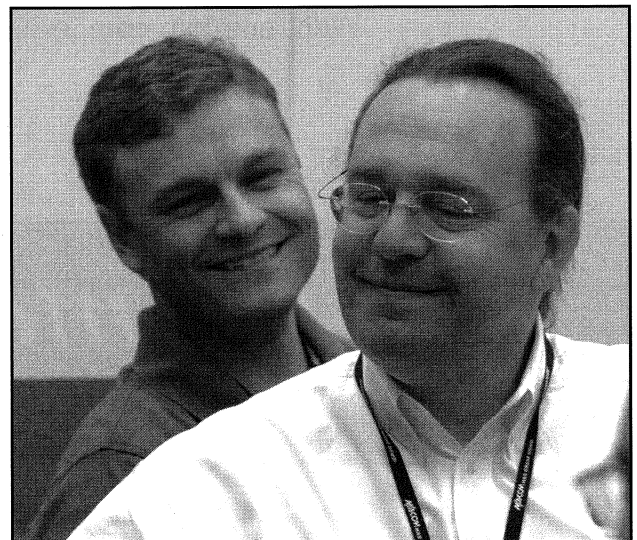
ter of fact, of kids who drop out, only 40 percent have jobs, and those who do usually work where there is a French fryer.

We used to be first in the world as far as graduating students with college degrees. We are now the fifth. India conferred graduate degrees on 1 million more students than we did two years ago. China has six times as many graduates in engineering and science.

Statistics show that if a student takes Algebra II in high school, he is making a million-dollar decision over a lifetime. They will earn on average \$1 million more than a student who didn't. High school students don't realize that.

Why should you be interested?

It has to do with the quality of education for your children and grandchildren. It will affect the future of your profession in 10 or 20 years, if not now. It is serious for us to remain competitive in a world growing in technical areas in many countries, and some are outstripping the United States. We have the ability to access scientific information. That's not remarkable. What is remarkable is that someone in a small city in China can get technical data and free courses from MIT. We are in a global engineering economy.



We don't know what joke Ray Trott was telling, but Scott Dolash and Rich Biby thought it was a good one.

What strikes you is that they don't know what you [as engineers] do. Typically, a child wants to be a fireman or policeman because those are visible professions. Once he is in high school and he has to make a decision, he doesn't know what the engineering profession is.

For all of us, it is the ability to make a good living,

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A lot of this industry supports programs that get professionals like you into the classroom. They also hire students as interns for a few months for industry exposure.

I'm A Ham, Too

A lot of you are ham radio operators. I am, too. My call sign is WS6BR, which happens to be my Novice call sign from when I lived in Pago Pago, American Samoa. I got it back through the vanity call-sign program. Because the statute of limitations has run, I can tell you something that happened when I first got my Novice.

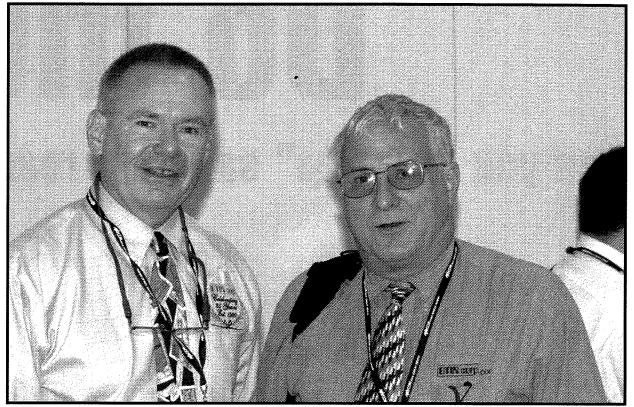
I had 60-watt transmitter and antenna. I heard W1AW in the noise. I had been a Novice for two months, and I thought, "wow." I called and had a brief QSO with them. The next day, I mentioned to other hams in the neighborhood that I contacted W1AW.

"That's great," one of them said, cracking up with laughter, because, he admitted, *he* had been my contact, *pretending* to be W1AW.

In the ham community, you're familiar with the "Elmer" concept? Your "Elmer" is the person who aided you and pointed you in the right direction. I think all of us have had an "Elmer."

I recall a short-wave listener who lived across the street and who introduced me to antennas. He pointed out that the dipole I made in the trees shouldn't have its wires placed parallel.

A few blocks away, there was a radio-TV shop. I was little kid. I wanted to get the job of replacing car



Alan Leffler and Bill Lieske Jr. were just two of the many Radio Club of America members who traveled to Denver for the annual APCO gathering.

radios — if you remember those metal monsters of the 1950s. The radios were embedded in the dashboard, and I could crawl under it. I made money pulling radios from cars and replacing vibrators and OZAs, if you go back that far to remember those components.

Kids these days are *much* more skilled in removing radios.

So think about expanding the "Elmer" concept. Think about getting involved in your local schools. Think about hiring interns. Think about the need to sustain this profession so that when someone, 15 or 20 years from now, is standing at this podium, he will be addressing people with the same skill and interest in the industry that you have.

By sharing my thoughts, I thought you might think about going to a high school and volunteering to help kids who are having difficulty in math and science. "FCC Best" is a program at the FCC to go out in to the community to talk about careers in wireless and broadcast.

The Obligatory Joke

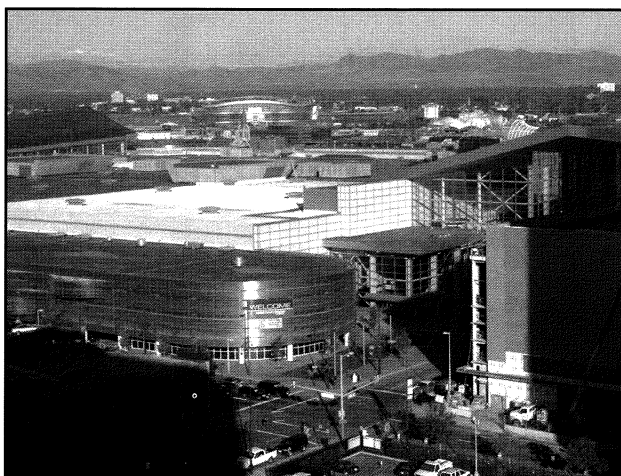
I understand from watching Ray this morning that it is obligatory to tell a joke.

Joe and Mike were good buddies. As baseball fans, they attended every game they could. They wondered whether there was baseball in Heaven. The subject came up every year. One day, Joe passed away. Two weeks later, a ghostly figure appeared to Mike.

"They let me come down to answer your question, 'Is there baseball in Heaven?', Mike. They play *two games a day*. Babe Ruth and Mickey Mantle both play. But this is good news and bad news," the ghost said.

"The baseball games in Heaven, obviously, is the good news. What's the *bad news*?" Mike asked.

"You're pitching next Tuesday," the ghost replied.



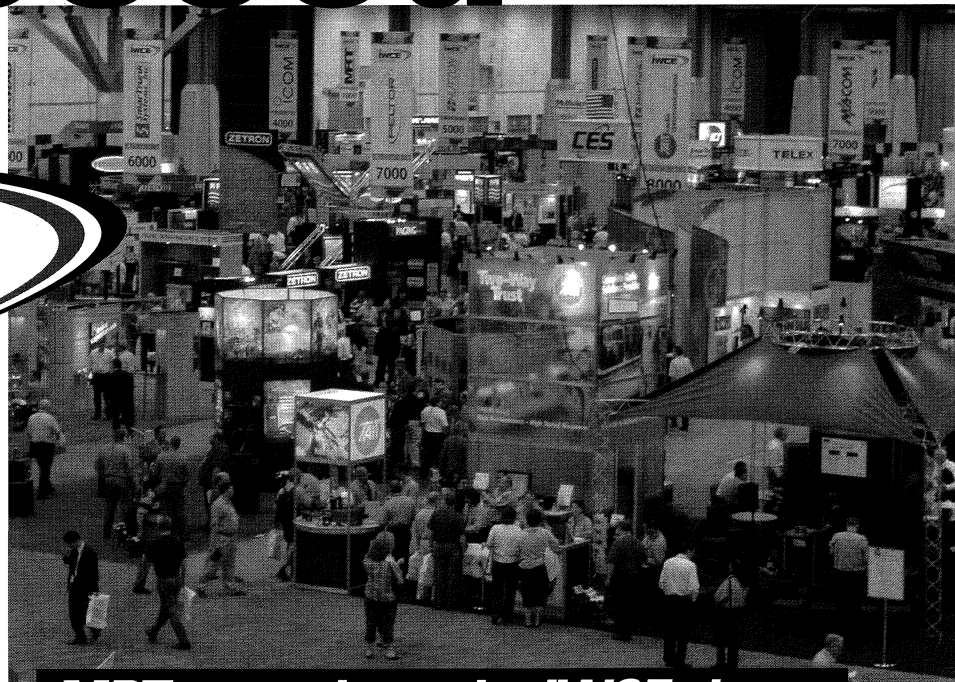
The Colorado Convention Center in the mile-high city of Denver was the site of this year's APCO annual meeting and the Radio Club of America's yearly breakfast.

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Happy Birthday, W2XMN

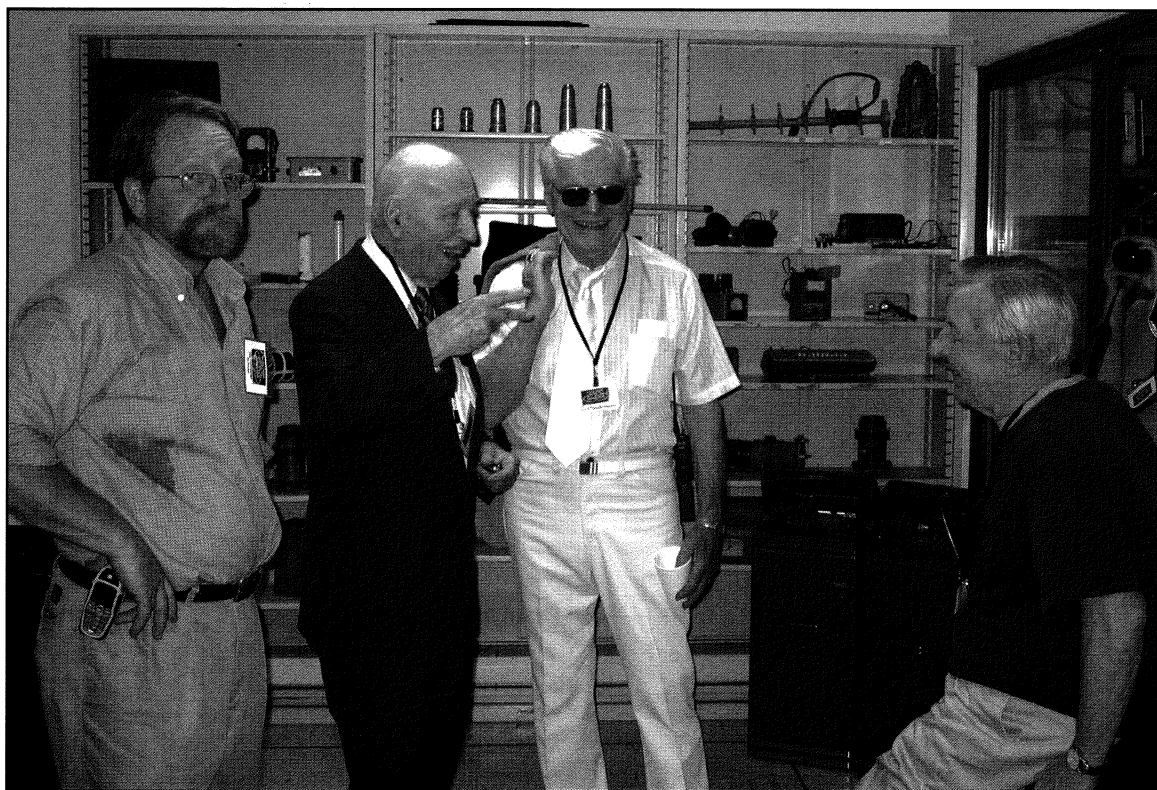
**Someone else might have celebrated
FM radio's 70th birthday by baking a cake.
One man built a transmitter.**

On Saturday, June 11, 2005, Steve Hemphill, an employee of Solid Electronics Laboratories and a member of the American Radio Relay League (WA3ZAE), saw his dream come true. At 11:45 a.m., with a flick of a switch, Hemphill returned to the air — for the first time in almost 6 decades — a FM broadcast transmitter on 42.8 MHz. This frequency was part of the original allocation for FM before broadcasters were moved to 88 MHz-108 MHz.

“This is a labor of love for me,” Hemphill said last June, standing next to a towering 6-ft.-6-in.-tall aggregation of dials, knobs and vacuum tubes that was four inches taller than he is. Hemphill, a Philadelphia-based broadcast engineer, spent a year of his life and \$5,000 of his own money to create this

replica - fairly closely - of the equipment used in November 1935 by famed inventor Maj. Edwin Howard Armstrong for the first public demonstration of FM radio from a New York City office building. Two years later, in 1937, Armstrong built the world's first FM radio station, W2XMN, in Alpine, N.J., along with a research laboratory and the gargantuan 400-foot radio tower that still looms over the Palisades Parkway.

That's the historic spot where more than 200 hardcore radio buffs gathered Saturday to quaff coffee inside a reception tent and to listen on loudspeakers to a live noon broadcast, via Hemphill's replica transmitter, on 42.8 FM - the original frequency band Armstrong used in 1935.

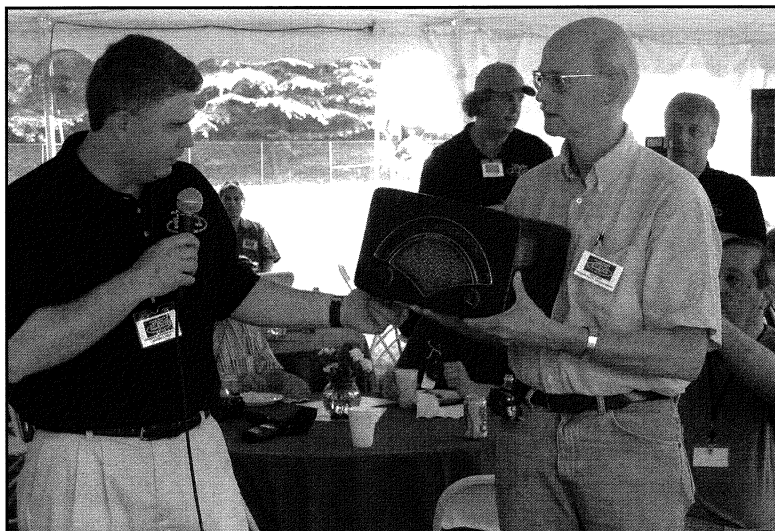


Enjoying the 70th-anniversary day at the original Armstrong site were (L-R) Mike Katzdorn, Henry Dietz, Tom Amoscatto and Gil Houck.

In commemoration of the first FM broadcast 70 years earlier by Major Edwin H. Armstrong, this special event under the call sign WA2XMN was authorized by the Federal Communications Commission under a Special Temporary Authority (STA). It was made possible by the efforts of Charles E Sackermann Jr., president of CSC Management and the current owner of the Armstrong tower.

The transmitter, a homebrew beauty made by Hemphill, operated as a full bandwidth audio, +/-75 kHz deviation, with standard 75 microsecond pre-emphasized audio. The program content comprised a live interview of panelists along with pre-recorded programming highlighting Armstrong's accomplishments. A radio version of the book *Empire of the Air* also was aired. The transmission concluded with the replay of the station KE2XCC's final sign-off recorded in March 1954.

Transmitting at 250 watts (QRP when compared to the 50 kW used by the "Major"), the antenna was located on top of the Armstrong Tower in Alpine, N.J., at a height of almost 1,000 feet above mean sea level. Signals were received as far away as Philadelphia, with most of the reports confirming Q5 copy. The ceremony was simulcast on WFDU (89.1 MHz), and it also was available via the Internet.



Charles Sackermann Jr. (L) was presented with an antique radio receiver during the course of broadcast day.

Currently, 42.8 MHz is a public-safety band. It now is defunct as a commercial FM band - and thereby hangs a tale. It's a tale of genius, pride and business skulduggery that casts Armstrong in an especially poignant role.

"It's moving to see how many people honor his memory," said his great-nephew, Robert Brecht, one of that Saturday's guests of honor.

Bringing Together Old Friends

"Somewhere at this very moment, a young boy or girl is tinkering with an idea," said WINS radio host Judy DeAngelis, imported from New York City to emcee. "Somewhere, the seed of an American dream is forming. Many years ago another boy had another idea. You know his name - Edwin Armstrong."

Her words were being spoken from the nearby red brick W2XMN building - unused for broadcasting since 1954. That day, it briefly became a studio again, as DeAngelis led a panel of experts in paying tribute to the inventing genius known, universally and reverentially, as "The Major."

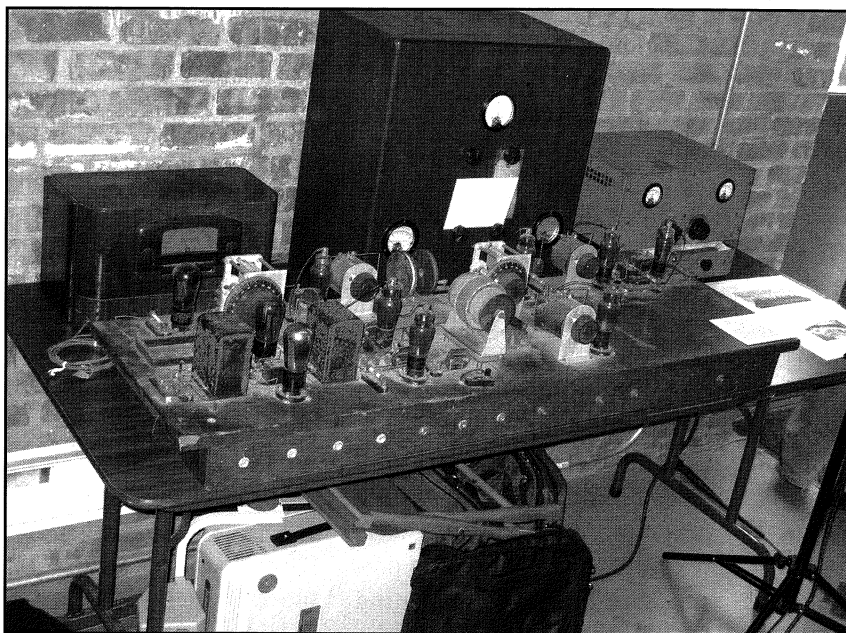
"Anybody who uses a cellphone, anybody who watches a TV program or who turns on a car radio or a scanner [is] using an invention that came from Major Armstrong," Hemphill said.



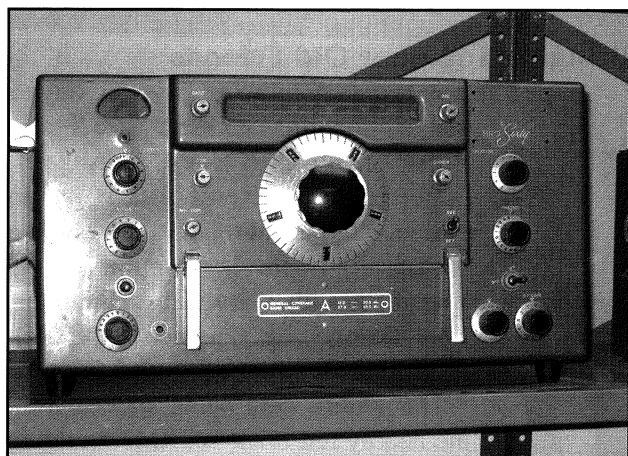
Participating in a panel discussion and historic broadcast at the original Armstrong New Jersey site were (L-R) Steve Hemphill, Mike Katzdorn, Gil Houck, Henry Dietz, Jerry Minter, (unknown), (unknown) and WINS radio host Judy DeAngelis.

The commemorative 42.8 FM broadcast was also simulcast on WFDU 89.1 FM and streamed on the Internet - making it a sort of technological meeting of the past, present and future. "This crosses three generations of moving information," said WFDU General Manager Carl Kraus. The STA was in effect until October 2005. Also, the concept of recreating the first FM broadcast network that connected Alpine to Connecticut, Massachusetts and New Hampshire is under consideration for the 75th anniversary.

In addition to the program, Mike Katzdorn (KB3LTX), Radio Club member and a collector of antique radio apparatus, put on display an original breadboard made by Armstrong. The master oscillator/balanced modulator used in 1934 during Armstrong's research and testing of FM at the Empire State Building is now part of Katzdorn's collection. Also on display were the first FM radios of the day.



An original breadboard of Armstrong's FM generator used at the Empire State Building transmitting facility surrounded by some antique radio sets.



A HRO amateur radio receiver on display at the site.

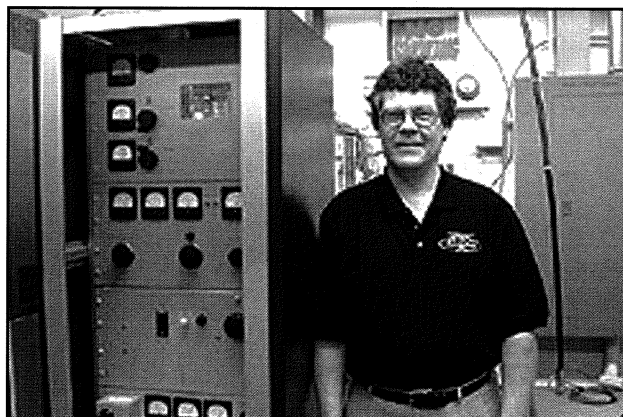
A number of amateur radio operators were among the more than 200 invited guests at the ceremony along with a group of Radio Club of America members that included Renville McMann Jr. (W2PCD), Jerry Minter, Gil Houck (W3BXO), Henry Dietz, Carl Kraus (WB2TZL), Bill Endres, Tom Amoscato, Larry Will (W3LW) and Eric Stoll (K2TO).

A Little Armstrong History

Among technophiles, "The Major" is a cult figure of Gandhi-like proportions. Such books as Tom Lewis' *Empire of the Air* have been written about him. Documentary filmmaker Ken Burns has made a series about him. And at least once during Saturday's broadcast, Hemphill teared up while talking about him.

"He gave his whole life for us," Hemphill said, choking back tears. "I feel very strongly about this. I just owe him a great deal."

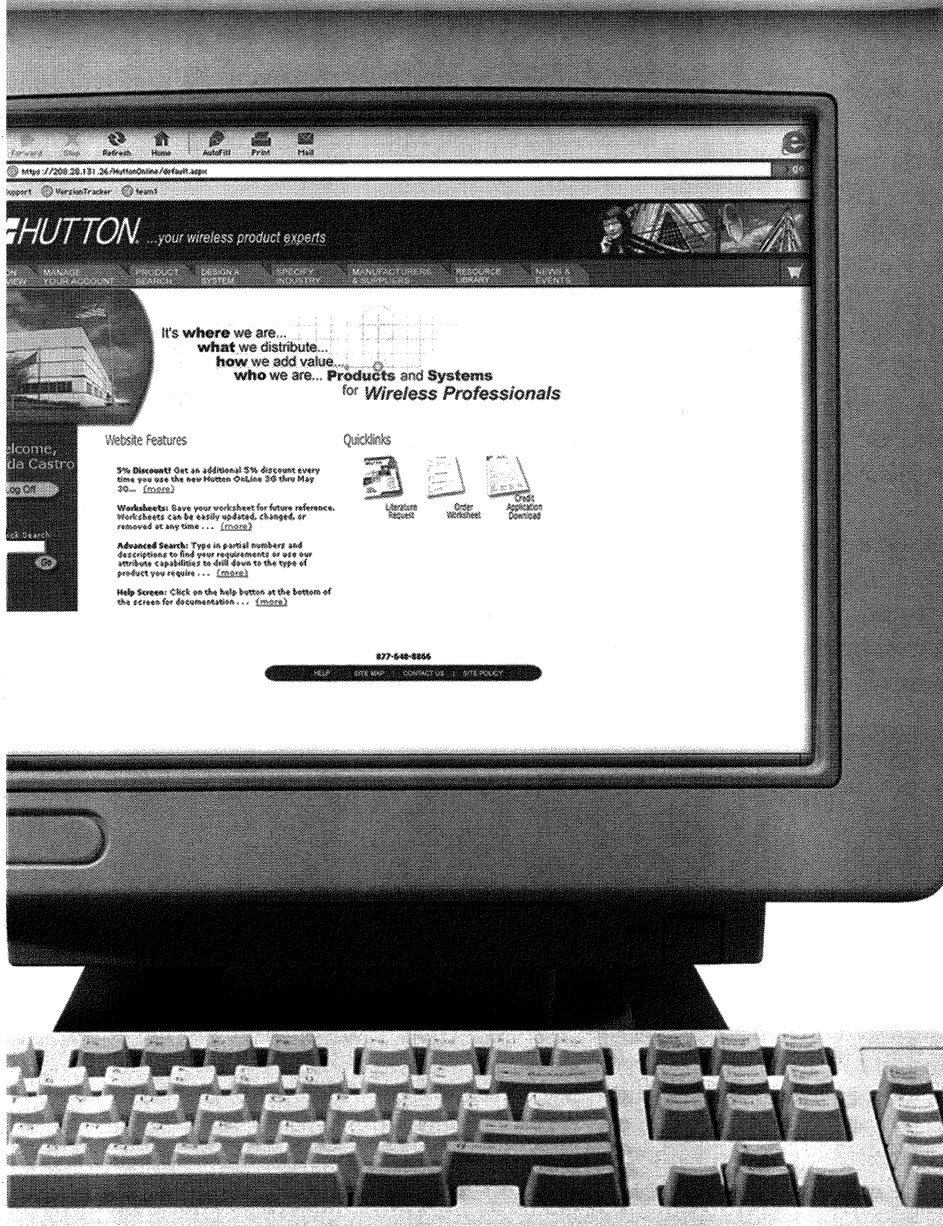
Armstrong (1890-1954) invented the first practical vacuum tube radio receiver in 1914. The inventing honors were stolen from him, many feel, by vacuum-



One man's dream turned into a historical event: Steve Hemphill stands with his rendition of original Armstrong equipment.

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tube inventor Lee DeForest, who won money and bragging rights through a series of court cases. Later, Armstrong developed the FM system as a way to improve on static-plagued AM. By modulating the frequency of the radio waves, rather than their height, Armstrong created a crystal-clear signal that was especially suited to music.



Maj. Edwin Howard Armstrong (1890-1954), inventor of the first practical vacuum tube radio receiver in 1914.

In those first years the Alpine studio was largely an experimental outpost, doing demonstration broadcasts a few hours a day, recalled Renville H. McMann Jr., who worked with Armstrong in the early 1940s. "They would set up receivers in auditoriums like Town Hall, bring in critics, and they'd hear sound like they'd never heard it before," McMann recalled. "They particularly liked the tinkling of water in glasses. You could never hear anything like that on AM."

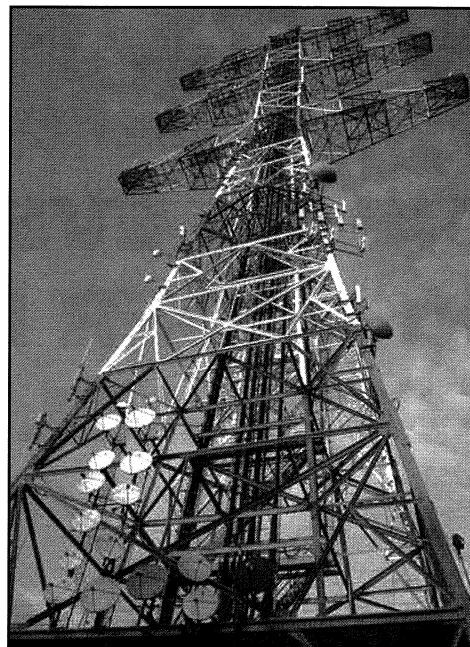
But Armstrong's experiments in FM brought him afoul of his onetime best friend, RCA's David Sarnoff, who was putting his research money into TV and didn't want any other new broadcast technologies to distract the public. Sarnoff began a campaign of low-level harassment of Armstrong, which included successfully, pressuring the FCC, in 1945, to change the FM band range from 42 MHz to 50 MHz to its current range, 88 MHz to 108 MHz - thus effectively rendering obsolete all FM receivers sold until that time.

Sarnoff's strong-arm tactics, many feel, literally pushed Armstrong over the edge, causing him to commit suicide by jumping out of a 13-story window of his New York City apartment building in 1954. But his invention, FM, flourished - helping, among other things, to fuel the rock music revolution when it became the bastion of renegade disc jockeys and album-oriented rock radio in the early 1970s.

especially suited to music.

In those first years the Alpine studio was largely an experimental outpost, doing demonstration broadcasts a few hours a day, recalled Renville H. McMann Jr., who worked with Armstrong in the early 1940s.

"They would set up receivers in auditoriums like Town Hall, bring in critics, and they'd

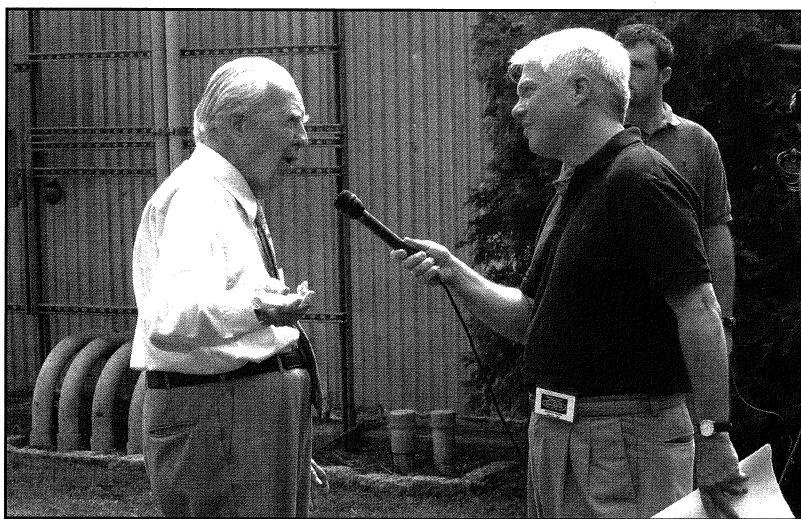


The Armstrong Tower, in all its glory.

Today, broadcasting is at another crossroads. Satellite and Internet technology are poised to steal FM's thunder, just as FM nudged aside AM in the 1960s and 1970s. The special radio event was a poignant reminder that - in broadcasting and elsewhere - nothing is permanent but change.

"It's always a continuing struggle, one form of technology replacing another form," Hemphill concluded.

Contributing to this article were Eric Stoll; Jim Beckerman of The Record, Bergen County, N.J.; and Steve Barreres (K2CX) of the American Radio Relay League.



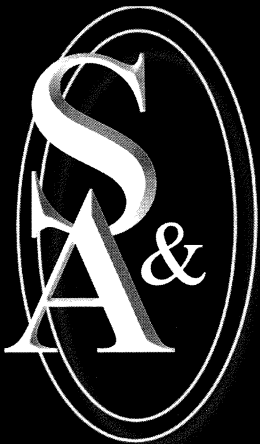
Jerry Minter is interviewed regarding his remembrances of the Armstrong transmitting facility.

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Post-Hurricane Katrina: 'Thank God For Ham Radio'

When the call came to set up emergency communications in the devastated tri-state Gulf Coast area, the American Radio Relay League swung into action, proving once again the underestimated value of wireless communications.

Of the many life-altering events people will conjure up when asked the question "do you remember when," Hurricane Katrina, which devastated the U.S. Gulf Coast in three states last August, most certainly will be one. Despite the warning that just such a hurricane was coming, hun-

dreds of thousands of people were, and continue to be, affected by the storm.

Like all other utilities in the area, telecommunications - both wired and wireless - were knocked out, which motivated the nation's amateur radio operators to take action. Right off the bat, the

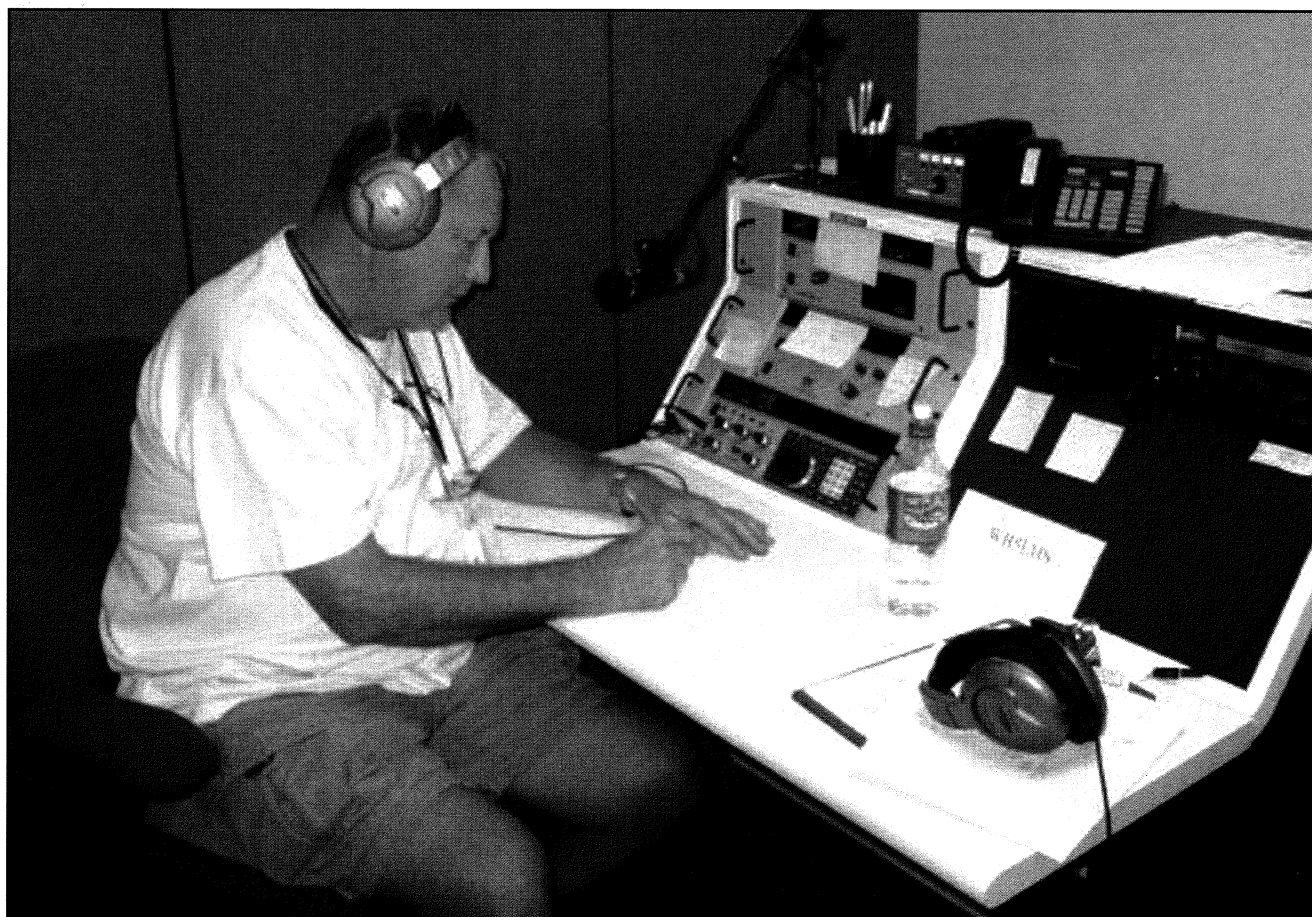


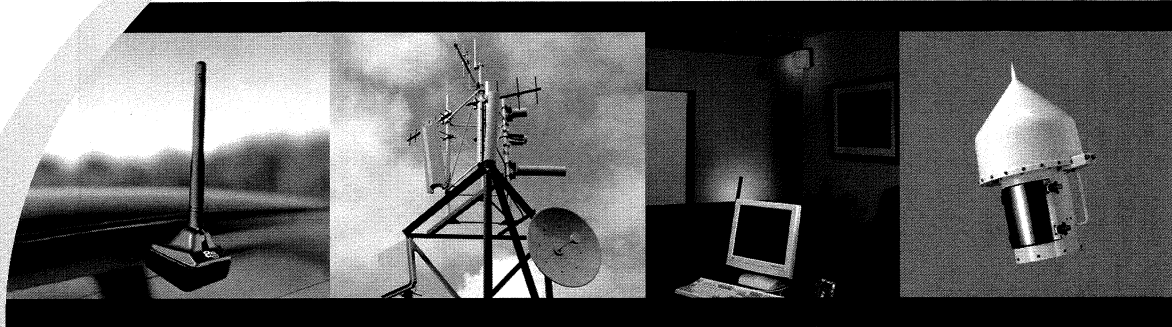
Photo by Gary Stratton (K5G1S)

John Wagner (WA5VBP) of Victoria, Texas, at the Louisiana state EOC ARES/RACES/SHARES operating console. Wagner flew into New Orleans from Houston to set up communications from the Superdome, but he was pulled out when the levees began to fail.

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Louisiana State Sen. Ben Nevers of Bogalusa uses amateur radio from the Louisiana State EOC in Baton Rouge to communicate with his emergency manager in Washington County. "When he finished, he shook everyone's hand and stated, 'Thank God for ham radio!'" said Louisiana SEC Gary Stratton, who took this photo.

Corporation for National and Community Service provided a \$100,000 grant supplement to the American Radio Relay League (ARRL) to support that group's emergency communication operators in states affected by Hurricane Katrina. The grant helped to fund "Ham Aid," a new ARRL program that supports amateur radio volunteers deployed in the field in disaster-stricken areas. According to ARRL's Chief Development Officer Mary Hobart (K1MMH), "Ham Aid offers a unique opportunity to support individual radio amateurs helping to bridge the communication gap Hurricane Katrina has caused."

She continued, "For the first time in ARRL history, we will be able to reimburse some of the expenses that hams incur in response to a disaster," she said. "We only wish that we could justify an expense reimbursement program like this every time Amateur Radio Emergency Service volunteers are called upon to help in a disaster or emergency, sometimes placing themselves in harm's way."

Getting Into Gear

At ARRL headquarters in Newington, Conn., the wheels started turning soon after the levees were breached. Under the leadership of ARRL COO Harold Kramer (WJ1B) - an experienced Amateur

Radio Emergency Service (ARES) Emergency Coordinator and special assistant to CEO Dave Patton (NN1N), ARRL staff members mustered to focus their energies on responding to the needs of ham radio volunteers. Says Kramer, "Their main job was to support the served agencies, such as the American Red Cross, the Salvation Army and FEMA. Because this was over such a widespread area, a lot of the amateur radio infrastructure in that area got destroyed, so we had to bring in operators from further out - as well as equipment." With a lack of communication cited as the largest obstacle to rescue and relief efforts, ARES members - with support from headquarters - began bridging the gap immediately.

Acting as a clearinghouse for information and volunteers, ARRL headquarters activities included helping to recruit volunteers, coordinating equipment donations and working with regulatory agencies and the news media. A daily conference call brought together headquarters personnel, section managers (SMs) and section emergency coordinators (SECs) from the affected region to provide situation reports, to compare notes and to request any assistance they needed.

Right after being called in to help, several HF nets were in operation to support amateur radio's response

to the emergency, including: the West Gulf ARES Emergency Net at 7.285 MHz days/3.873 MHz nights; Health and Welfare traffic at 7.290 MHz days/3.935 MHz nights; the Salvation Army Team Emergency Radio Network (SATERN) at 14.265 MHz and 7.265 MHz. Said SATERN National Coordinator Pat McPherson (WW9E), amateur radio was “absolutely critical” in the immediate aftermath of the disaster. He also gave credit where credit was due. Because the thing that makes the SATERN network is its interface with hams who are not traditionally part of the net but who show up from all over just to help out, “it seems in these crises that the entire ham world is on our frequency waiting to help, and that is why we have been blessed with success.”

Dennis Motschenbacher (K7BV), ARRL’s sales and marketing manager, volunteered to head into the hurricane strike zone. He checked in at the American Red Cross ham-radio-support volunteer center in

Montgomery, Ala., on Sept. 6. Motschenbacher had a complete HF station as well as sufficient supplies to stay in the field for a couple of weeks. He also expected to be deployed to help in Mississippi. ARRL Media and Public Relations Manager Allen Pitts (W1AGP) also has headed to Montgomery to coordinate with national news media at the request of Alabama SM Greg Sarratt (W4OZK) and the Red Cross, which were being overwhelmed with operational issues and unable to deal with media inquiries. On Sept. 7, some of the manufacturer-donated ham radio equipment was packed up and shipped from ARRL headquarters.

The First Few Days In The Gulf

During the first week of the communications-recovery efforts, Louisiana SEC Gary Stratton (K5GLS) hailed amateur radio as “the only means for state officials at the state emergency operations cen-



Photo by Dennis Motschenbacher (K7BV)

At the American Red Cross marshaling center in Montgomery, Ala., ARRL Alabama SM Greg Sarratt registers a just-arrived volunteer, later deployed to a Red Cross shelter some four hours away and cut off from communication within the hardest-hit portion of Mississippi.

Initial Hurricane Katrina Damage

According to Kenneth P. Moran, director of the Office of Homeland Security Enforcement Bureau at the FCC, Hurricane Katrina was responsible for:

- Knocking out more than 3 million customer phone lines in Louisiana, Mississippi and Alabama
- Shutting down more than 1,000 cell sites
- Silencing 37 AM and FM radio stations
- Putting out of service more than 20 switching centers
- Cutting off six public-safety answering points (PSAPs)

ter (EOC) in Baton Rouge to communicate with the so-called 'Florida parishes' above Lake Pontchartrain. We have had praise from one end of Louisiana to the other about amateur radio operators."

He continued, "There was a communication to the EOC in Baton Rouge from the Federal Emergency Management Agency (FEMA) that said 'ham radio is our prime communications with you, and they should get anything they need,' so FEMA recognizes the importance of ham radio." Stratton recounted how state officials arriving at the EOC would walk into the amateur radio room at the EOC asking if they could get through to hard-hit Washington Parish (La.). "We gave 'em the mike, and they were able to talk to their people over there," he said, noting that enough VHF repeaters had been restored to permit the officials to get their messages through.

A marshaling center was established in Covington, La. ARES continued to support Red Cross shelters and Southern Baptist Convention debris-clearing in

St. Tammany Parish (La.), as well as Baptist Men's Kitchen canteen operations. In Washington Parish, ARES volunteers - including more than a dozen from south Texas - arrived to provide critical communication among hospitals and the parish EOC. Field teams continued to use HF to maintain communication with the EOC in Baton Rouge, and there were plans to install a temporary VHF repeater in Washington Parish.

Despite this success, there still weren't enough amateurs as far as Stratton was concerned. "We really didn't have enough operators [a week after the flooding]," he said, especially when New Orleans, Plaquemines and St Bernard Parishes were set to be reopened. "One of the biggest problems we were going to have was relief for the operators who had been down there [in the affected parishes]," he said. In one instance, an operator deployed from Shreveport to Baton Rouge returned home only to be redeployed to Washington Parish. Stratton also pointed out that Amateur Radio even had to loan some government agencies their communication gear because the feds' equipment didn't function. "It was an eye-opener to me, operating in the EOC down there, how terribly their equipment operated," he said. "We had to loan the Coast Guard a HT that was opened up for government frequencies because their equipment failed in the ops center."

In Mississippi, ARES operators helped to maintain communication among hospitals, EOCs and shelters. ARES District Emergency Coordinator Tom Hammack (W4WLF) reported operators were sleeping on the floor when off duty. Ron Brown (AB5WF) State RACES Officer and ARES DEC, worked on a staging area for amateur radio volunteers near the Mississippi Emergency Management Agency in Jackson.

When Norm North Jr., (WA1DBR) of Springdale, Ark., reported for volunteer duty, he was deployed to a Red Cross shelter in Biloxi, Miss., which had no outside communication before he arrived. "There, I continued to relay as much message traffic as I could. Sometimes it was difficult to get out health-and-welfare inquiries with all the streams of emergency traffic." North said typical requests included pleas from mothers trying to find missing children, youngsters looking for parents, and other trying to get word to families and loved ones that they'd survived the storm and were at the shelter. "Many messages got through," North said, "and I received many thanks and hugs."

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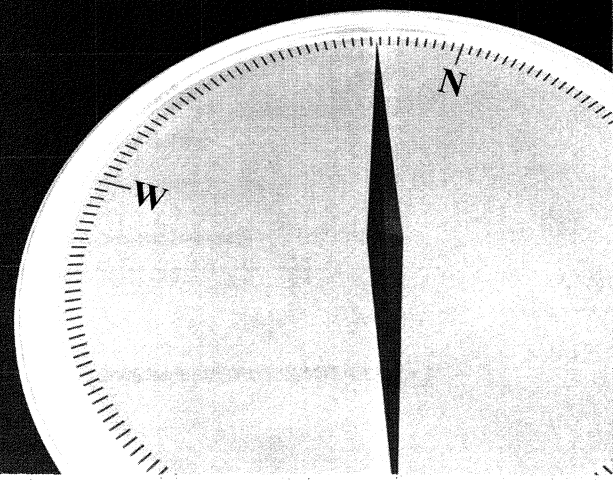
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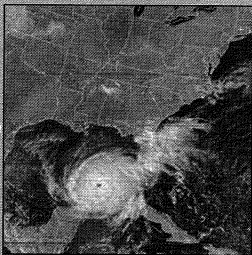
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Enter Hurricane Rita



A NOAA-18 satellite picture of Hurricane Rita on Sept. 21, 2005.

As if the destruction caused by Hurricane Katrina wasn't enough, at press time, Amateur Radio Emergency Service (ARES)/Radio Amateur Civil Emergency Service (RACES) teams were shifting gears from the Hurricane Katrina response to confront Hurricane Rita, the second Category 5 storm to enter the Gulf of Mexico in less than a month.

As it was for Hurricane Katrina, the West Gulf ARES Emergency Net on 7.285 MHz (days) and 3.873 MHz (evenings) had been activated for the latest weather threat. ARRL South Texas Section Emergency Coordinator Jerry Reimer (KK5CA) said the Red Cross, which had established a shelter hub in Lufkin, Texas, was looking for Amateur Radio communication support.

In addition to providing assistance at shelters for the hundreds of thousands of residents who were attempting to exit the anticipated strike zone, Amateur Radio volunteers were being used to monitor outbound traffic, keeping an eye out for accidents and other emergencies.

According to North, it was gratifying to play a small role in the aftermath of the disaster. "EOC officials let me know in no uncertain terms that Mississippi had greatly appreciated me coming to them and offering a little help and comfort," he said. "I was very happy just to do my small bit."

'Ham Radio: It Works!'

And as things began settling down and more commercial wireline and wireless networks were restored, Greg Sarratt (W4OZK), ARRL Alabama Section Manager, called headquarters with an urgent renewed call for amateurs for the Gulf Coast Red Cross disaster relief effort. Sarratt noted that while the initial response to the need for volunteers produced "a very gratifying steady flow of operators," the number of new operators had dropped dramatically. Although many HF stations were set up around the region, the need then switched to deployable 2-meter equipment along with a continued flow of complete HF and VHF stations.

And here's the take from the top. In the first days following the hurricane, Jim Haynie (W5JPB), president of the ARRL, told his constituency: "There is no doubt that the recovery efforts following Hurricane Katrina will be the largest and longest emergency actions that hams have ever undertaken. But we are also hardened and resolved to turn this event into one of the most glorious opportunities to show the unique attributes of ham radio - it works! We can again show the world that we have the best trained, most ingenious and dedicated ARES and RACES operators ever in history. We have the attention of the world press, and we will show what ham radio can do. There is already no doubt that when the history of this event is written, the role of amateur radio will be one of honor. Unpaid volunteers who came through for their country and communities when all other systems failed or were overwhelmed. By working together and mutually supporting each other, we can perhaps give these very dark days a small glint of glory. Let these be the days that hams, decades from now, remember with pride. Together we can - and will - make it happen because, after all, we are *hams*."

The American Radio Relay League contributed all the information for this feature.



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At Press Time

On Sept. 19, Rep. Steve Israel (D-Huntington, N.Y.) announced the re-introduction of the "Amateur Radio Emergency Communications Consistency Act" in the U.S. House of Representatives that will help to protect the vital function of amateur radio as an emergency communications and public-safety resource.

According to the congressman, amateur radio operators have always filled in the gap when other communications systems failed. Hurricane Katrina was no exception. In the storm's aftermath, operators of amateur, or "ham," radios have been instrumental in helping residents in the hardest hit areas, including saving stranded flood victims in Louisiana and Mississippi. State and local governments as well as disaster relief agencies could not possibly afford to replace the services that radio amateurs dependably provide for free. However, the hundreds of thousands of amateur radio licensees face burdensome regulations that make it extremely difficult to provide their public services.

Rep. Israel's legislation seeks to help ensure amateur radio operators are available for emergency communications in all sections of the country, regardless of whether they live in such developments as a retirement

community or a townhouse subdivision. Restrictions against antennas render amateur radio operators unable to use their licenses, which in turn ultimately may hinder their emergency-communications role during times of disaster or national crisis.

"Amateur radio provides a vital public safety communications service to the public at no cost to taxpayers," Rep. Israel says. "So-called 'hams' provide emergency communications when regular channels are disrupted or disabled. State and local govern-

ments as well as disaster relief agencies could not possibly afford to replace the services that radio amateurs dependably provide for free."

Adds Frank Fallon, Hudson-Long Island (N.Y.) division director of the American Radio Relay League, "Amateur radio works in emergencies because we hams are willing and know how to set up emergency stations near the disaster. Unfortunately, if all new housing developments contain deed restrictions forbidding outside antennas, there will probably come a time when there will not be enough ham radio operators to help their neighbors and countrymen."



Joint Pole Authorizations: Devils or Angels?

Seems like a good idea – use an existing neighborhood utility pole for a cell site and avoid the zoning process and new construction. Until the property owner where the utility pole sits takes notice.

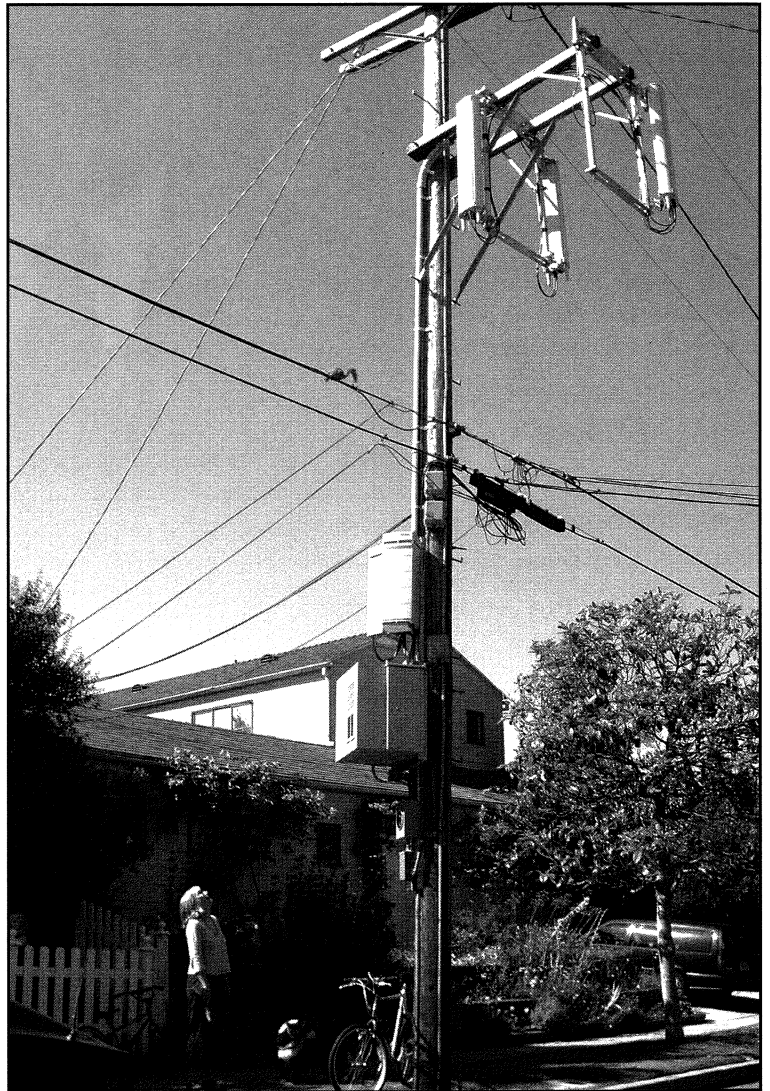
By Don Bishop

If a wooden utility pole in the front yard at a Mount Holyoke Avenue residence in Pacific Palisades, Calif., were a banana tree, the cellular antenna cluster Cingular bolted onto it would be the kind of low-hanging fruit homeowner Andy Dintenfass could do without.

“It’s 27 feet, eight inches from my bedroom,” said Dintenfass, who has lived in the neighborhood for 21 years. The cell site’s sudden construction on a pole between their houses surprised Dintenfass and next-door neighbors Jim Holcolmb and Karen Dawn.

Cingular sent contractors to install the site under authority of a joint pole authorization (JPA) processed by the Southern California Joint Pole Committee. The committee has about 30 members, including Cingular, that provide electric, telephone, cable TV and wireless telecommunications services. Members share ownership, use and maintenance of utility poles. The committee processes JPAs and exchanges payments among members. Los Angeles exempted JPAs from its Above Ground Facilities (AGF) ordinance — and Pacific Palisades is part of Los Angeles. The 2003 ordinance requires zoning approval for many other antenna installations.

Norman Kulla, who was chairman of the Pacific Palisades Community Council until July 1, 2005, when he became district director and senior counsel for a Los Angeles City Council member, said the only govern-



Taking the bad with the good, sometimes you just don't want that tower in your neighborhood, whether it enhances your service or not.

ment office that had to approve wireless facilities covered under JPAs was the Bureau of Engineering (BOE) at the Los Angeles Department of Public Works.

When a new cell site is planned for installation on an existing pole, BOE issues a permit without notice to neighbors or requiring compliance with AGF provisions. Without a JPA, a wireless carrier installing a new facility "would have to give notice to neighbors and comply with size and color requirements, all intended to control aesthetics and safety. But wireless carrier JPAs are not subject to that because of this exemption. It's going to require modification of the ordinance to cure the problem," Kulla said.

Kulla added he encouraged "responsible parties at the companies making the installation to use public relations, recognize public policy and exercise goodwill to remove" the antenna. He said the neighbors might "retain counsel to find some deficiency that was not complied with, some non-conformance they can pursue on a legal basis. There is nothing else to do except to encourage the company involved to be a good citizen."

What About The CCC?

Holcolmb asked attorney Cris Armenta to look for a deficiency in Cingular's siting authority. She visited the California Coastal Commission (CCC) to see whether Cingular had obtained a coastal permit. It hadn't. Armenta said Cingular's installation may have violated 1976 California Coastal Act limitations on real-estate development. Among other things, the Act protects the scenic beauty of coastal landscapes and seascapes.

Pam Emerson, a CCC supervisor for the Los Angeles County area, said, "A coastal permit normally is not needed to maintain and modify existing overhead facilities, including the addition of equipment and wire to existing poles or other structures, right-of-way maintenance and minor pole replacement."

She added that the CCC can pinpoint certain areas or manners of repair or expansion that may need permits. "Between the sea and the first public road on the coastal bluff overlooking the water, additions are limited to an increase of 10 percent of the bulk or height of the structure. In that area, an addition to a utility



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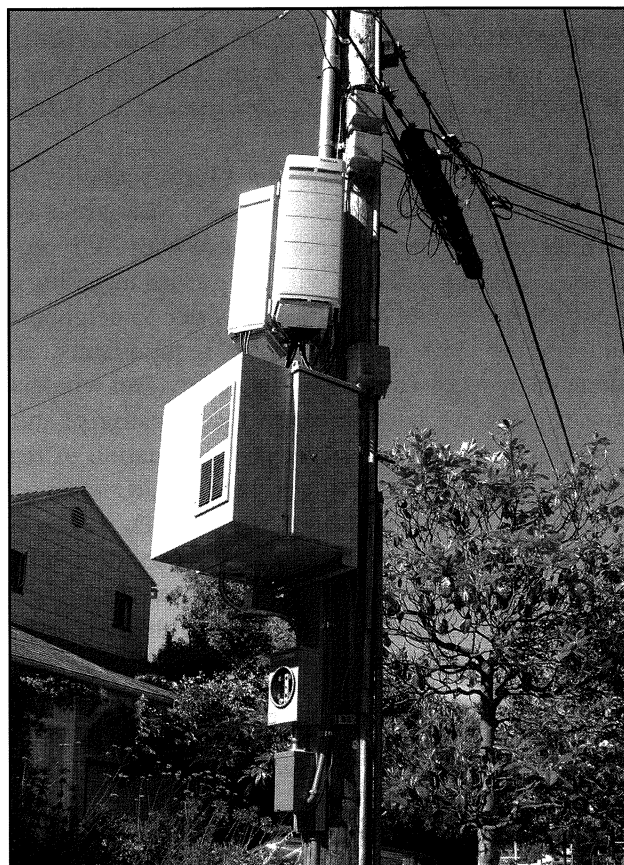
John Georges, CEO and co-founder of NextG Networks, a company that specializes in building distributed antenna systems, said his company has installed infrastructure he described as covering 80 percent of Pacific Palisades' population. A nationwide network-services provider, NextG's systems are used by carriers in many locales in lieu of building their own sites.

NextG will not identify carrier customers nor will it disclose the specific locations of its antenna sites, so the matter of whether Cingular could or would use DAS as an alternative to the site it constructed with a JPA near the Dintenfass residents remains open to speculation. Georges would confirm that there is one unidentified operator in that area using his system, and two more are expected to join in the next few months.

Among other siting choices, NextG also makes use of JPAs to place antennas and converters on utility poles and to string fiber-optic cable where necessary. Its pole equipment generally has a smaller footprint than Cingular's installation on Mount Holyoke Avenue. NextG chooses a smaller antenna, and DAS technology requires less electronic equipment on the pole because larger base-station equipment can be placed in a central location. Fiber-optic cables link the base stations with small converters near the antennas.

"Carriers use us for residential coverage mainly. We serve users who didn't have cellphone coverage and who did not want towers. The combination of existing towers and using our system is a good blend," Georges said.

"Among other locations, our system is appealing to luxury neighborhoods where they wouldn't let a tower in before."



Only 28 feet from Andy Dintenfass' bedroom window, cell-site equipment on a utility pole includes air conditioning equipment that a city inspector told him "will be noisy; you can count on it," once the site is activated.


pole that is not part of the transmission facility would be subject to the 10 percent rule," Emerson said.

Whether a development affects a *private* or *public* scenic view figures into CCC involvement. "If someone wants to hang something over a big scenic bluff and it can be seen for miles, we might find interest. If it sticks up in front of someone's picture window, there is not necessarily a statewide interest," Emerson said.

Armenta said Mount Holyoke Avenue was a passageway to one of the most important scenic vistas in the area. "There is a path there, and people congregate to look at the view," she said. The pole in question, positioned between the Dintenfass and Holcomb-Dawn residences, affects a public view. She said a calculation of pole dimensions would show that Cingular's attachments exceed 10 percent of the pole's pre-existing bulk.

"We're in conversations with Cingular to assist them in locating a different site. We're cautiously optimistic that they are following the course they said they

reliable (ri lī'ə bəl), adj.
... dependable in achievement,
accuracy, honesty, etc



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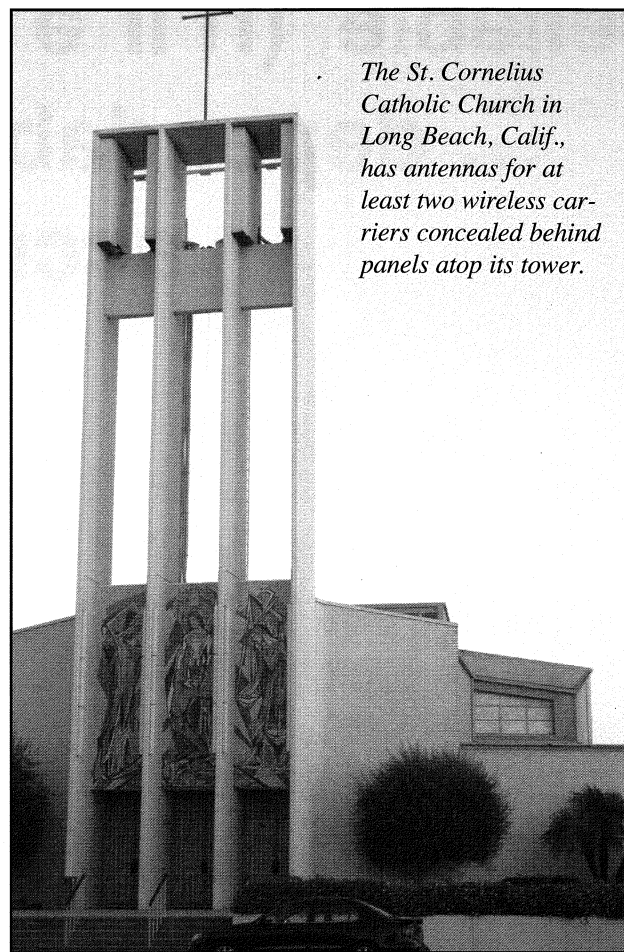


would follow to look at other sites," Armenta said. "If they don't follow that course, we will file a complaint with the Coastal Commission affecting not only this site but also what other sites have they placed up and down the coastline without obtaining permission first. That is a battle they might rather not have."

Gregory Sweet, president of Acquire Telecom Services in Reno, Nev., used JPAs in Northern California when he worked for Sprint during a build-out of the company's fiber-optic network. "JPAs keep utilities from having duplicate poles going through the same community," he said.

Sweet said some wireless carriers don't properly approach the people who live, work and play near their facilities. "The wireless industry is generally *reactive*, rather than *proactive*, in their searches for sites. We don't tell anyone we're considering a site in their neighborhood," he said. "We file an application and, when it hits the public record, we go around and try to convince people why they shouldn't object to it, rather than why they should support it," he said.

He continued, "A more productive approach would be to show the benefits, especially for public safety.



The St. Cornelius Catholic Church in Long Beach, Calif., has antennas for at least two wireless carriers concealed behind panels atop its tower.

Often, we're in damage control right off the bat and behind the eight-ball in these applications when we go before the public board. It puts us in a tremendous uphill scenario."

Paperwork And Payments

At the Southern California Joint Pole Committee, it's all about paperwork and payments. Velma Prouty represents SBC on the committee, and SBC owns 60 percent of Cingular.

"I've been on this desk for 23 years. Wireless carriers started coming in around 1995. There is a membership application, and they have to submit their financial statements because they need to be able to pay their bills because the Committee processes bills for the members — every pole costs a monthly access fee," she said. "You don't turn down a member unless the financial papers are not in order."

"A member that wants to attach equipment to a pole sends an authorization form to all the other members. They have 45 days to respond and, if they do not respond, it is considered automatic approval," Prouty said. "Once the authorization has been

Don Bishop

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<http://www.trottgroup.com>

approved by all, it's OK to attach. Every member with equipment attached to the pole has to pay the other members; they pay through us."

Kathleen Dell was a facility engineer for Pacific Bell Telephone when she left to start BMS Communications in Simi Valley, Calif., in 1988. She created an automated joint pole authorization system.

Information published by BMS said Dell "worked with the developers of the original microcell units to determine the most appropriate engineering guidelines for placement of cell sites in the public right of way." Company literature said BMS since has engineered more than 75 percent of microcells in use in the public right of way. Neither Dell nor any other company executives or managers would comment.

"Cingular is an owner of 5,000 poles as member through BMS, but I don't know how many of those they have antennas on," said a BMS employee before referring the inquiry to higher-ups.

"Utilities that belong to the Committee use a JPA contract that allows them to attach to poles. We send the JPA as an *intent*: 'This is the space we need to purchase.' We send it to everyone on the pole," the BMS employee continued. "They check their database to see whether they have a job in progress or they sell us the space. Once that's approved, we do our build. When it's completed, we process a final bill and exchange dollars. We pay every member that's on the pole. We have a record that we are an owner on the pole, and we have a liability to share maintenance."

Were There Alternatives?

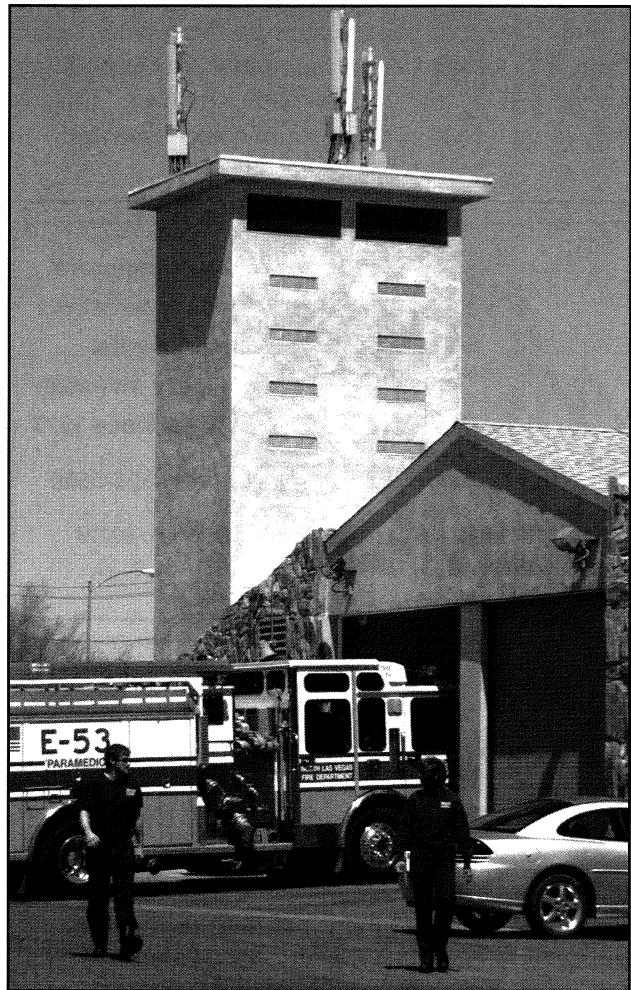
Cingular wouldn't say what alternatives were considered before choosing the JPA, and they wouldn't comment on whether it ever discusses plans with neighbors before sending contractors to begin installation work on JPAs.

Mike Hyler, general manager of the Riviera Country Club in Pacific Palisades, said Cingular previously received zoning-board approval to build a tower disguised as a palm tree on club property.

"Cingular went to great lengths to use a second- or third-generation palm tree that would have been virtually undetectable in its proposed location inside the club among other trees," Hyler said. "Apparently, neighbors hired a specialist to testify about possible damage caused by radio waves. There was fear in the neighborhood, and science didn't alleviate those concerns. Cingular's approval was overturned on appeal." The Riviera Country Club is about three miles from the Dintenfuss residence.

Randy Gayer, COO at Irvine, Calif.-based VelociTel, said alternatives for placing cellular antennas in residential neighborhoods include near schools, where an antenna pole might be placed at an athletic field and combined with a fixture for flood lights. He also said sometimes a city government will make rooftop space available on such municipal properties as fire stations, a city hall or a water tower, or it will lease parkland for a tower.

"In some parts of the country, cellular antenna towers are up to 200 feet tall, but some Southern California municipalities limit antenna height to 40 feet or 60 feet," Gayer said. "When they're that low, it's difficult to collocate carriers. Other choices are to go on rooftops. When they're not available, you have to find a good site and build it. Many municipalities require stealthing to make antennas look like flagpoles. We've been able to come up with creative ideas."



Cities often make space available for antennas at fire stations. A wireless carrier has antennas atop a hose-drying tower in North Las Vegas.

Sue Ritter, VelociTel's director of operations, said that with JPAs, "it's great to hang the antennas, but there are issues with stealthing the equipment. Many carriers want to build quickly and inexpensively, but if you have to vault the equipment underground, that's quite costly. Faced with those costs, sometimes carriers have looked at redesigning their search rings to look for other options."

The alternatives Gayer listed are among those Ritter said normally are considered first. "A JPA might be one of the last things you do. Sometimes you get lucky and it works," she said. "Sometimes it doesn't, and you go back to the RF engineer and ask, 'Can you redesign the ring? Can you add more rings?' Maybe the answer is to break the search ring into two or three smaller rings, which costs the carrier more money but, if it's important to their coverage plan, that might be the option."

Ritter added churches to the list of antenna-site alternatives for residential coverage. "If you can find a church and put the antennas on the roof or stealth them into a steeple or a high point on the building, we've had a lot success with churches. Usually they're interested in the rental income," she said.

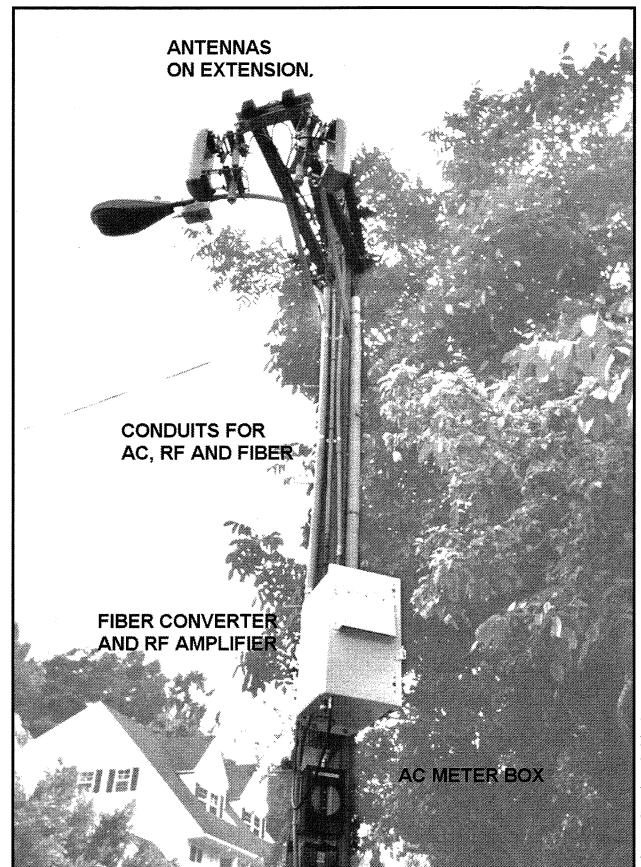


Photo: Corning Cable Systems.

A NextG Networks low-power muni cell in Topanga Canyon, Calif., near Pacific Palisades, uses an existing light pole. For an incoming call, the signal arrives at the antenna and travels a length of coax into the box, where the conversion is made from RF to optical. The signal exits the box from the bottom over fiber-optic cable.



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What's Next?

Back on Mount Holyoke Avenue, the Cingular cell site was almost ready to be activated. Contractors had installed the antennas and the base-station equipment. Backhaul and electrical lines were connected. A few loose wires remained, and a power meter had yet to be placed.

Except for Karen Dawn, Dintenfass' neighbors didn't return calls asking for comment, but Armenta said they were prepared to sign a petition for delivery to the California Coastal Commission, if necessary.

Andy Dintenfass said of Cingular: "They are actively trying to solve the problem. They're not being unpleasant about it." He hoped the next technicians to visit the site would be there to remove the cellular antenna as swiftly as they installed it.

This story, reproduced here with permission, appeared in a recent issue of AGL.

Who's Talking...And Who's Not

Some who might be expected to have an opinion about the effect a cellular antenna might have on property value were knowledgeable and willing to talk. Others didn't know or wouldn't say.

■ *Tower association* - Mike Fitch, president and CEO of PCIA - The Wireless Infrastructure Association, said: "Antenna siting is all about providing required wireless service coverage to customers and the public. Of course, what is ideal from an engineering standpoint must be balanced with other considerations including availability of property to use and zoning requirements. However, there are no data suggesting that the presence of cellular antennas has any negative impact on property values. We have also seen some communities plan for wireless services and accommodate the appropriate infrastructure to ensure more communications choices and seamless coverage as a way to create added value for new home sales."

■ *Neighbors* - Eight residents with homes on the 300 block of Mount Holyoke Avenue not adjacent to the antenna did not return calls. Jim Holcolomb, who lives next door to Andy Dintenfass, asked an attorney to look into the matter.

■ *Wireless carrier* - Citing Holcomb's use of an attorney, a Cingular spokesman said company policy disallows talking to the press when litigation may ensue.

■ *Real-estate agents* - Coldwell Banker sold a home at 338 Mount Holyoke Ave., last year. Price: \$2,795,000. A company spokeswoman declined to comment on whether a cellular antenna may affect real-estate value, nor could she find local office managers to comment. "They don't see it as a win-win" to talk about it, she said.

■ *Realtor association* - A California Association of Realtors spokeswoman said: "We don't track anything like that. We have nothing in hard numbers to give you." She also could not find an association member willing to comment.

■ *Newspaper* - *Palisadian-Post* Editor Bill Bruns said real-estate agents told him an antenna's property value effect is "a wash," if it is not on the subject property. "Some home-

owners are happy when a new antenna covers their cellphones-until it comes to their front yard. The real-estate people seem to say an antenna reduces property value, but with a wink they say people like to get their cell calls," he said.

■ *Appraiser* - Paul Hostert, the California Association of Real Estate Appraisers' former president and a current director, said "maybe" an antenna affects property value if it is in someone's yard, but otherwise, "here in Southern California, people are so used to cellular antennas, they have no effect or little effect on value. If they stick an antenna on a utility pole, it's no big deal. The pole already has wires on it. The utility pole would affect the property value, not the antenna. The homeowner has either aboveground or below-ground utilities. If he has aboveground, the whole neighborhood is that way, and the property value is based on aboveground utilities, not one cellular antenna."

■ *Assessor* - Glenn Barnes, president of the executive committee at the California Assessors' Association and himself a county assessor, said a taxpayer would face a challenge to provide evidence that a cellular antenna affected property value. "They would have to show that it was in fact the antenna and not something else. If you can't measure it, then you can't legitimately lower an assessment," he said. "I'm one for measuring things and not doing something arbitrary. Where the evidence is going to come from is from sales of surrounding properties. Someone will have to identify that the reason that sale is what it is, has something to do with that condition and place."

Dale Edgington, the chief appraiser in the Los Angeles County Assessor's Office, said he was unaware of any study showing whether a cellular antenna on or near a property affects the sales price of a single-family residential property. He said he never heard of a property owner asking for a reduced assessment because of a cellular antenna.

■ *Carrier association* - A spokeswoman for CTIA - The Wireless Association, which represents wireless carriers, said the trade group had no information on the subject and suggested that such an inquiry be made of PCIA.

The Next Generation Of Disaster Communications

The CEO of nascent Roaming Messenger is sure his follow-me emergency-communications product will get the right information to the right person at the right time and at the right place.

In light of 9/11, U.S. military action in the Middle East and the recent Hurricane Katrina, the growing necessity for secure emergency communications should be a clear priority moving forward in order to help ensure efficient response prior to and after any future disasters. There are many wireless companies that are attacking this challenge, one of them being Santa Barbara, Calif.-based Roaming Messenger, a provider of a breakthrough mobile messaging technology that reportedly offers key emergency-response applications.



Jon Lei

The messenger works intelligently. After traversing any wired or wireless network and arriving at a recipient device, the device-side software agent decrypts the messenger, opens the content package, and executes the function or functions contained

therein. In the event that a targeted user does not respond, the package will “pick up and go” - roaming until it reaches an authorized device as previously determined by the originating application.

Research firm Frost & Sullivan recently presented Roaming Messenger with its “2005 Excellence in Technology of the Year Award” in biological surveillance technologies. “The Roaming Messenger technology encapsulates both data and workflow logic into smart software messengers. These messengers

are able to roam across wired and wireless devices, tracking down and interacting with appropriate first responders and emergency management personnel, alerting them about a biological incident to facilitate their timely response,” says Frost & Sullivan research analyst Michael Valenti.

Jon Lei is president and CEO of Roaming Messenger, and he has some definite ideas on how his wireless product could have helped first-responder teams post-Katrina along with how emergency communications should be handled going forward. Here are some of his thoughts:

Q: *With the recent events surrounding the hurricane that hit Louisiana, crisis communications has been a topic of discussion. How would your technology have helped to facilitate a more effective response prior to the hurricane and afterwards in terms of emergency response?*

Lei: It’s unfortunate with what has happened in Louisiana, and it’s unfortunate that it takes disasters like Katrina and 9/11 to validate the need for more effective communication technology and methodology. For a long time, people have thought that email was good enough for communicating information, and that human-operated radio or phone dispatch systems were good enough to get the responders on-site to resolve situations.

But communications in times of crisis is not about people chatting about what is going on. It is more about workflow-based communication. By workflow, I mean the different steps and the different information you have to communicate to respond to an emergency either before in preparation or after in disaster recov-

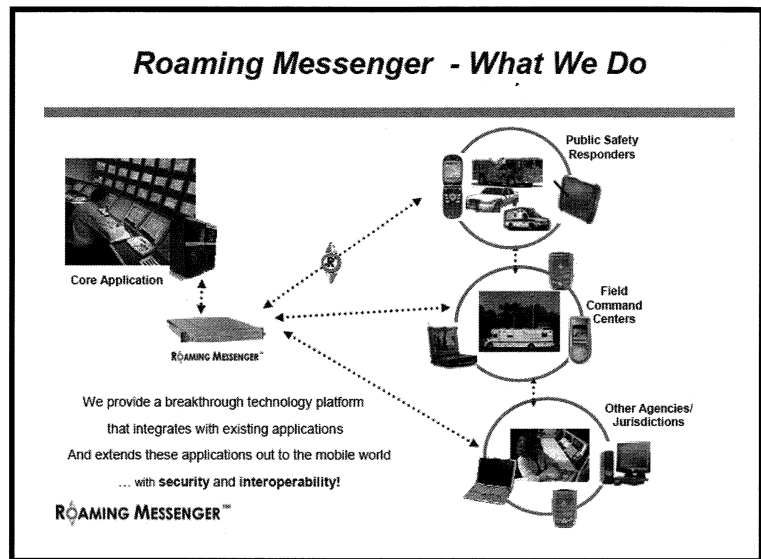
ery. These workflow steps may be steps in response plans, steps in evacuation plans or steps in rescue plans. All of these communications, especially exemplified in times of crisis, are about workflow, not just about people writing emails back and forth.

We could have helped in responding to Katrina in many ways with workflow-based messaging. GPS location-based delivery of information and decision making [let's us know] where the responders are so the responders closest to a particular incident gets the information first before anybody else. For example, if trucks were supposed to be sent to the convention center and did not arrive on time, our messengers can actually 'bug' the responsible parties until actions are taken. We saw what is happening on TV and it is not like these response teams and response agencies don't know what to do in a situation like this. They just don't have the right communication technology to send and receive the right information to the right person at the right time, and this is the basic problem that we solve with our breakthrough innovation smart interactive messaging technology, Roaming Messenger.

Q: A major issue impacting the situation has been the area's loss of power. How would Roaming Messenger help to overcome this challenge in terms of coordinating efforts, executing rescue plans and initiating relief efforts?

Lei: We don't really solve the loss of power problem, but the loss of power really affects the different ways that people can communicate. In the past, communications to certain people, such as responders and response managers, were through their desktop email, so if the power goes down, they will not be receiving their email. You have to switch to a different channel of communication, such as a PDA phone.

The last thing you want to do is switch your communication technology in times of crisis. What we could have done to help overcome this challenge is seen through our platform, which supports many types of communication devices, whether it's a desktop, a smart cellphone, a dumb cellphone or a basic text-message cellphone. We are a single platform that allows different response management systems to communicate amongst the various channels. So if the desktop channel goes down due to power loss, it's okay from a response-management-system perspective.



By sending off a messenger, we are going to track down the correct person on his or her BlackBerry phone or Palm phone, above and beyond their desktop phone, to make sure that they get the information that they are supposed to get. They get a response back so that we know the information has reached them, that they have acknowledged the information and that they've taken the appropriate steps to coordinating efforts for executing rescue plans or any kind of initiatives currently in the works.

Q: How would you differentiate between a natural disaster versus a terrorist attack as far as the utilization and implementation of your technology?

Lei: There really isn't. This is all about workflow-based communications and real-time communications of the right information to the right person, whether the situation is a natural disaster like a hurricane, a terrorist attack or in a business environment. It also has to do with Sarbanes-Oxley compliance, where various different pieces must come together and people must acknowledge certain things at the right time, otherwise bad things will happen. So there is no differentiation between a natural disaster and a terrorist attack from our standpoint regarding the benefits of our technology.

A lot of our prospective channel partners were heavily involved in Katrina, and they are now finally seeing the benefits to what we have been saying. We are excited about where we are at right now, and the world is turning their heads around and thinking about more effective communication and more effective technologies for communicating information.

Postscript: Hurricanes Point Out Communications Needs

In the wake of two Category 5 hurricanes in the same year making their way across the Gulf Region of the United States for the first time in recorded weather history, Congress has decided to get involved with making sure the communications problems that plagued the area following the devastation don't happen

This issue of the *Radio Club of America Proceedings* dwelled predominantly on emergency preparedness, which is part and parcel of the wireless industry. As participants, we have noted the need for more equipment, more spectrum and more attention paid to this, and recent national disasters have brought these needs to the highest offices in the country. During recent hearings hosted by the full Senate Committee on Science, Commerce and Transportation on communications in disaster situations - specifically the SNAFUs impeding the restoration of both emergency and commercial communications after Hurricane Katrina, in particular.

Sen. Ted Stevens of Alaska, long a champion of communications concerns of all types, outlined his concerns, focusing on what he characterized as three common problems: repair crews unable to get proper "credentialing" to enter disaster areas, safety and security for the emergency crews, and the lack of electrical energy affecting their efforts.

"Repair crews were ready to begin restoring service, but couldn't get permission from officials who were controlling the area to enter the area. There needs to be a plan in place for important people who are associated with restoring the critical infrastructure of communications," said Stevens.

Besides coping with the damage itself, wireless carrier teams encountered delays with FEMA personnel and other officials in getting through to emergency work areas. They also often required armed guards in transit and at the repair scenes (many were shot at by snipers in the New Orleans area, and Cingular took it upon itself to send security teams to Houston to protect its repair teams) plus they were frustrated with many power-source problems.

Stevens conceded that solutions will be hard to come by, although he indicated there was some light

at the end of the tunnel via digital television legislation that will free about 24 megahertz of RF spectrum for first responders (*see related story in this issue*).

What One Congressman Wants

Rep. Bart Stupak of Michigan has called on the White House to fund and implement an interoperable, inter-agency communication network for first responders in the wake of the hurricanes. In a letter to President George W. Bush, the former law-enforcement officer and founder of the Congressional Law Enforcement Caucus cited widely reported communications-system breakdowns and inadequacies among military personnel and other emergency service workers as one of many reasons for his demand.

"One thing is clear: The inability of our first responders to communicate is one of the biggest factors hindering our relief efforts," he wrote.

While costs for full interoperability are estimated at \$18 billion, Stupak charged that, for the second year in a row, the president's budget "completely zeros out" specific funding for interoperability. Stupak touted the Public Safety Interoperability Implementation Act (H.R.1323) that he re-introduced in March 2005 to establish the Public Safety Communications Trust Fund.

"In fact, in 2002, President Bush himself said that the first minutes and hours after an attack are critical, and it is essential to have the equipment, strategies and communications for our first responders," Stupak added. "Four years after 9/11, we have yet to make a proper investment in communications upgrades, and it shows. This lack of commitment to our country's first responders unfortunately became glaringly evident this past week...America cannot wait for another terrorist attack or national disaster. We have demonstrated how the interoperability problem can be solved using today's technology."

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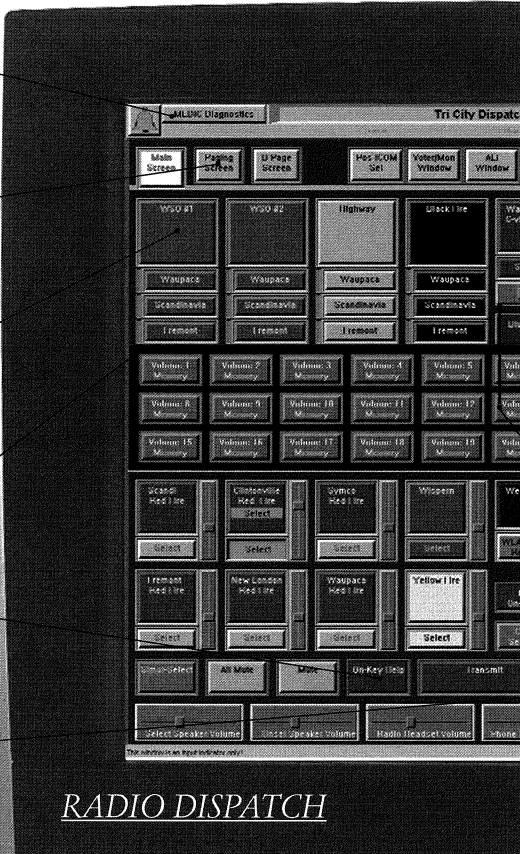
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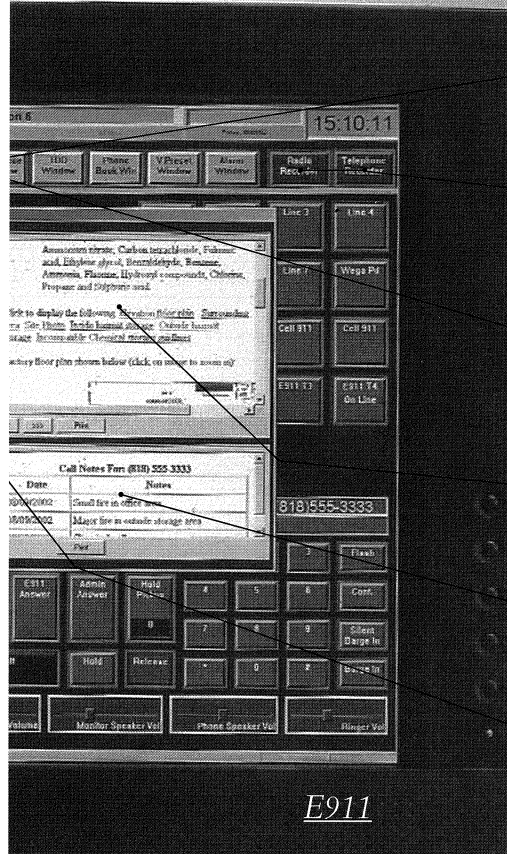
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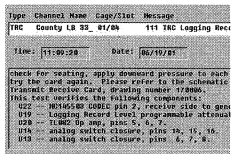
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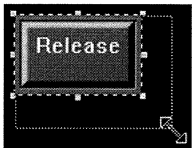
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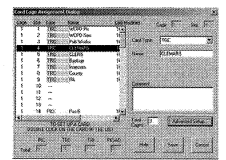
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