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A Message From Phil

hat's in a birthday? For an organization like ours, being alive and well after 98 years has rich meaning. We have survived the most tumultuous century of innovations the world has ever seen. All throughout these incredible years, no industry has been more dynamic than wireless communications.

The Radio Club of America has much to be proud of when it comes to our history. The industry pioneers who belonged to the Radio Club of America are too numerous to list here. Still, we must not sit complacently basking in our glory. We need to find relevance for the Club in today's wireless industry.

Looking back on 2006, I feel optimistic. Our Awards banquet last November was an overwhelming success. The speaker was informative as well as entertaining. Our award recipients were accomplished and deserving of their recognition. We welcomed a new group of Fellows. And the Technical Symposium had two highly respected presenters who were challenging and thought-provoking. The Club's breakfasts at major industry trade shows continued to attract high-profile speakers and a large number of attendees. Our West Coast Spring Event demonstrated how individual members can rise up, grab the reins of an idea and make a difference for the Club and our industry.

Recognizing that any organization is only as vital as its membership, 54 new members joined our ranks last year. This was spearheaded by a new membership brochure that effectively tells the Radio Club of America's story.

Our publications have blossomed during the past few years. Both the *Aerogram* and *Proceedings* have taken on a new look and have presented us all with informative articles and important Club news. And the recent launch of our e-mail newsletter should serve as another way for us to build and maintain a community. If you didn't receive the first e-letter in April, please contact Acting Executive Secretary Karen Clark and provide her with your e-mail address.

Last, but by far not the least, are the new initiatives our individual members are spearheading on behalf of the Radio Club of America. We are partnering with the Association of Public-Safety Communications Officials (APCO) International and the American Radio Relay League for mutual benefit and good fellowship, and the first Radio Club of America/APCO initiative took place this past April in Texas.

2007 is shaping up to be another banner year.

Keep in mind that the Radio Club of America will be 100 years old in 2009. Plans are underway for a gala celebration, and we need every member's brain power and horse power to make it a success. Please join in now during the planning stages to help make this event one that will set the tone for our second hundred years of service to the wondrous world of wireless.



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Detuning: A Non-Standard And Situational Discipline

– By Richard P. Biby, P.E. (F)

Challenges in AM detuning of cellular towers include varying distance calculations, correspondence with affected broadcasters and federal regulation. Proper measurements before construction will save you from a world of headaches.

escribing the minutiae of detuning cellular towers to prevent them from disturbing the signals of nearby broadcasters (affecting AM radiation patterns) can be a dry subject -- if you let it be. So, in this case, it's good to be the king. The nice thing about being the publisher of *AGL (Above Ground Level)* magazine is that I can occasionally pull rank and get away with writing informal articles, like this one.

We received many responses and inquiries about my previous article on AM detuning (*AGL* magazine, October 2006). I'll try to answer questions raised by readers in this and subsequent articles. Most questions group around three particular topics: the distance requirement for action, "waiver letters" from the AM station, and the FCC Enforcement Bureau's ability to understand and evaluate detuning issues.

Equal Confusion Under The Law

First, a quick review: Depending under which section of the FCC's rules a licensee operates, different rules or policies apply. This is a long-standing concern (read "peeve") of mine, and of many other engineers and technicians who deal with compliance within the industry.

Why should a PCS carrier be any different from a cellular carrier, from the perspective of disturbance to an AM station? From a structural standpoint, they are absolutely the same. However, the cellular folks licensed under Part 22 have a specific rule that dictates what measurements must be made and, unfortunately, specifies the more-stringent measurement procedure documented in the Part 73 broadcast rules [47 CFR 73.154(a)].

To make things worse, some licensees have a rule governing their compliance with AM-pattern protection. Why? There is no good reason, actually. For example, public-safety licensees have no obligation to protect AM stations, although they might build new towers that could cause even more disturbance to an AM station than a cellular operator.

(Suggested action: The *appropriate* place for an AM pattern-protection rule is in either Part 1 or Part 2 of the rules, where it would apply equally to *all* licensees, not just some. Placing it in an early section is more sensible for a measurement procedure for *all* licensees.)

Action Thresholds

What is the distance threshold (nearness) for a licensee constructing or modifying a tower in the vicinity of an AM pattern that requires action? It is either 1 kilometer (0.6 miles) for non-directional stations or 3 kilometers (1.9 miles) for directional AM stations -- unless it is 3.2 kilometers instead.

Huh? Why are there two different thresholds: 3.0 kilometers or 3.2 kilometers?

Split personality is the simple reason. The FCC speaks with two different voices in this case. The FCC has separate and distinct bureaus to deal with regulation and control of different industry sectors within the telecommunications industry.

(Continued on p. 8)

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The Media Bureau deals with the mass media, such as cable systems, TV, direct-broadcast satellite and radio (AM and FM). In the conversion within federal agencies from English to metric measurement standards, different bureaus converted with different standards. When the 2-to-10-mile measurement standards are properly converted to metric, the distances would be 3.2 kilometers to 16.1 kilometers. However, some bureaus rounded those numbers to read "3 to 16 kilometers." The broadcast folks use 3 kilometers, while others of us (say, those of us who know how to multiply) in the non-broadcast side of the house use the 3.2-kilometer figure.

For the Part 22 licensees, the Media Bureau had a heavy hand in having the rule adopted. Meanwhile, the Part 24 (Personal Communications Services) licensees only have a public notice to require their compliance, and they use the 3.2-kilometer standard.

"OK, Rich," you say, "this is fun, but what should I do?" Well, I've made my living at being technically conservative and trying not to give lawyers too much unnecessary money. I would recommend that all licensees employ the 3.2-kilometer distance threshold for directional stations. You might end up doing work, in some particular instance, that is not absolutely necessary, but no one can *argue* with you. Unfortunately, it is almost impossible to turn back the hands of time with any construction. If you don't capture the radio-frequency environment *before* the construction, you will never be able to conclusively prove whether your construction or modification has a negative or a non-significant effect on an AM station.

Some consultants recommend protecting AM stations that are even further away than 3.2 kilometers. Why? While everyone can agree that 3.2 kilometers is the maximum distance to which a station should be protected by FCC standards, there is a solid engineering reason why construction could have a significant effect



beyond 3.2 kilometers. There is also some case history where construction has resulted in civil litigation. The risk is small; however, given the litigious nature of our society, we all appreciate due caution represented by the acronym "CYA." There are some rare instances where significant negative effects can be predicted; however, I would consider them to be rare. Don't be surprised to see recommendations for action where AM stations are further away than 3.2 kilometers; however, it will be an exceptional situation where action is really necessary or appropriate.

Waiver Letters

Most of us (consultants) believe that a written concurrence from the AM station in question can eliminate the need for field measurements -- even when the rules (or public notices) specifically state that *at least some* measurements shall be made. While I routinely recommend this, the industry has loosened its position on this in recent years. If you can get actual written concurrence from the AM station, then most carriers (even their legal divisions) appear to be comfortable that field measurements can be skipped. However, written concurrence is becoming increasingly rare.

For minor changes or modifications on the tower, standard industry practice now is to send the AM station a letter that the change is about to occur and to state that no measurements will be taken. For simple changes (*e.g.*, changes in antennas, replacement of transmission lines and some other modifications, especially when the height of the tower does not change and other physical characteristics of the tower remain unmodified), the possibility for significant disturbance of AM patterns is negligible. So while the rules say we need to "do" something, as a practical matter, every reasonable engineer (cellular and broadcast) knows that measurements only place unnecessary burdens on the AM stations and on the service provider.

Compliance And The FCC

The FCC's old "Compliance and Information Bureau" had a much friendlier title before becoming the more stern-sounding "Enforcement Bureau" back in 1999. Regardless of what their business cards say, I've not been overly impressed with reports of the technical knowledge base among some -- not all -- of the folks in the field doing inspections. Admittedly, these poor folks have a job that requires them to deal with a lot of technologies and to know a little bit about *all* things wireless. (I know *I* would love the job, but we also know I'm

(Continued on p. 10)

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not "normal".)

Enforcement action should be thought of in three distinct areas or disciplines: in the field, at the FCC and in the courtroom. One action can often lead to another, and the one you think you want is not necessarily the best one for you.

>>*Field inspectors* -- Field-enforcement folks are typically from a local field office, and they investigate just about any kind of complaint. They supposedly run around "just checking" on things to make sure we're all compliant with the rules. Nevertheless, I've found that field personnel often don't have the background to understand a lot of the technical issues with problems that arise. They often seem to gather some information and refer things "to Washington."

>>*Commission staff* -- As a general rule, I'm usually happiest when the staff at the Portals gets involved. Washington (and by extension, the Gettysburg, Pa., office) folks usually know pretty well what the real deal is. They often can take necessary and appropriate actions to solve issues or enable the right thing to be done by applying a little pressure in the right places. However, regarding AM detuning issues and many of the subtleties of AM facilities, few members of the FCC staff have both the in-the-field experience and the theoretical knowledge to really understand the issues. Few are able to make helpful suggestions to defuse a situation or to take a concrete position supporting one side or the other in a dispute.

Nevertheless, some really excellent folks who have the appropriate background remain. A few were even AMdetuning consultants themselves. They can and will help with difficult situations. You should always feel comfortable calling the FCC staff and asking for help. Pose your problem as a hypothetical, if you think you might have made a "boo-boo" (or you're just suspicious of bureaucrats). Otherwise, feel free to share the details, particularly when you are comfortable that you are "in the clear" regarding liability.

(Continued on p. 12)





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>>Meanwhile, in the "People's Court" -- So many comments have been written about attorneys that I will not even *try* to insert a cynical remark here. However, typically, by the time attorneys get involved, things are getting...complicated. AM detuning is not an easy subject. There are so many exceptions to any clear rule that it can be difficult to get a clear legal handle. I've never been involved in a civil suit over AM detuning; however, I have heard of some.

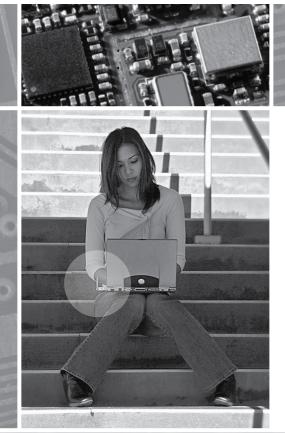
I *have* been involved in cases where towers had to be removed, like when they were constructed too close to an AM station, to clearly establish negative effect. As previously mentioned, this has typically been in cases when "before construction" measurements were not made (prior to my involvement with the site). Thus, the stance of the AM station always has been that the cellular structure was responsible for substantial disturbance to the AM station's pattern and, therefore, proportional financial compensation from the structure owner was appropriate. The cellular company determined it was less expensive to remove the tower and lose the investment than to continue to fight it. (I came into that project after the tower was built, what I would definitely call a "short" cycle to decommissioning.)

Avoiding The Next Level

So, how do these three things -- consistent calculation, correspondence and regulation -- interplay? Each is a higher-stakes level of complexity, cost and potential negative effect to your operation. It you can defuse a problem at each level before it advances to the next, you've definitely done yourself a favor. ■

About the Author: Rich Biby (publisher of AGL magazine) is president of Waterford Consultants in Waterford, Va. This story appeared in the December 2006 issue of AGL. Biby can be reached at rbiby@agl-mag.com.



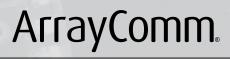


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The 2006 Radio Club of America Awards Banquet



President Elect Phil Casciano (left) and President Tony Sabino (right) share a moment at the podium as the gavel for 2007 changes hands.

Jay Kitchen (F) (left) shows off the Barry M. Goldwater Memorial Award given to Anthony J.F. Clement (L) (right) for his design and manufacture of towers, and the design and construction of North America's largest amateurradio phased HF yagi sextet.



Intel's Sean Maloney (left) accepts the 2006 Lee De Forest Award from Radio Club of America Vice President Martin Cooper (F) (right) for his leadership in the creation of a new broadband wireless technology: WiMAX.

Sir Angus Tait, winner of the 2006 Fred M. Link Award for his substantial contributions to the advancement and development of land mobile radio and communications, was unable to attend the Annual Banquet.

Richard J. Reichler (D) (F) (left) receives the Special Services Award from Radio Club of America President Tony Sabino (right) in recognition of his untiring and unlimited personal effort in helping to organize and codify the Club's operations.

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Keynote speaker Karim Khoja (left), president and CEO of Afghanistan wireless carrier Roshan, receives a token of the Radio Club of America's appreciation from President Emeritus Mal Gurian (right).

Ken Hoagland (D)(F) (left) congratulates Ronald E. Frisbie (F) (right) on his 2006 Ralph **Batcher Memorial** Award. Frisbie was honored for his collection and preservation of 2,000 examples of early radio equipment, and the construction and operation of a museum that offers students the opportunity to view and learn about historic radios.





Radio Club of America toastmaster and President Emeritus Raymond C. Trott (F) (left) shows off his 2006 President's Award as he stands with Radio Club President Tony Sabino. Trott was cited for his 30 years of unselfish dedication and support of the Radio Club as a Fellow, a Director and a past president.

Vincent R. Stile (F) (left), chairman of the National Public Safety Telecommunications Council, gives Harlin R. McEwen (F) (right) the first-ever Richard DeMello Award in light of his demonstration of the highest levels of person and professional conduct; for his performance in the local, state and national public-safety communications arena; and for his devotion and leadership to bridge the gap between all levels of government and organizations.

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David J. Rowan: The 2006 Fellows Response

resident Sabino, directors and Fellows, members and distinguished guests: We the Fellow class of 2006 accept the elevation to Fellow in the Radio Club of America with enormous pride and just humility for the accomplishments of those before us. We recognize the debt we owe to past and current members. We have been the valued recipients of genius, resourcefulness, foresight and hard work.

Close to our hearts are mentors, many of them in this room this evening. They have generously guided and prodded us while sharing their incredible knowledge and insight. We would like to thank you all by name, but we are only permitted a few minutes for this response. We take this opportunity to thank you collectively from our mind and hearts. We're looking and thinking of you now with affection, gratitude and renewed fellowship.

Nine years ago, the respondent for that year's Fellows made the point that fellowship, curiosity, the spirit of sharing goodwill and the desire to create and explore were the essence of RCA. I'm taking license from Tony Sabino's words. In an organization with such a broad cross section of talented members and a wide geographic distribution, these words ring true. Without the RCA, there would be less opportunity for people to meet and discuss their ideas with movers and shakers in the industry and to do it socially in such a positive atmosphere. It is a visceral, unique power that lights the fires of achievement and the zeal for professionalism in the new people and validates the older members.





The Radio Club of America welcomed 10 new Fellows at the 2006 Annual Banquet. Back row (left to right): David L. McCartney, Michael B. Powell, Steve D. Rahn, Robert Scott Harvey, Chris J. Ryg - Front row (left to right): Peter W. Moncure, Robert B. White, Michael J. Clarson, David J. Rowan - Not pictured: Wanda S. McCarley

Today, 10-year-old children have more wireless communications with them than we had combs or hair brushes 30 years ago. Walk by a high school as class breaks, and you see more students talking on wireless devices than physically talking to each other. This has become a dynamic cross-generational culture, one that changes direction dramatically at a whirlwind pace.

As we have new responsibilities directed at those who use our products and services, along with the new technology, we will be challenged with economic and ethical questions. Wireless serves humanity as communications, a security device, a lifeline and friend when no on else is around.

We, the class of 2006, accept these challenges. We share this quest with you, our mentors, associates and friends -- the people and companies represented so brilliantly by the Radio Club of America. ■



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Help Wanted: Treasurer Long Hours, No Pay, Big Payoffs

Eric D. Stoll, Ph.D., P.E., Fellow and longtime Radio Club of America treasurer, is retiring from that role after many years of fine service to the association. He's won nearly every major award given by the Club – the President's Award (2005), the Special Services Award (1989) and the Henri Busignies Memorial Award (1994) – since joining in 1975, but those plaques aren't why he's continued to keep our finances not only stable but growing. In the following conversation with Publications Committee Chair Debra Wayne (F), Stoll tells us a little about his experiences and what he plans to do when he finally hangs up that green visor.



What were some your earliest experiences in the RF industry? What initially piqued your interest?

My professional career began at Bell Laboratories, where I worked on the development of highspeed digital-transmission systems. Our department's task was to create the prototype equipment to send and receive the T4 system signals with bit rates of about 275 megabits per second. We then designed and built corresponding equipment for the T3 (46 Mbps) and T2 (6 Mbps) systems. The T3 system concept is now in wide use in the broadband distribution networks supporting the Internet.

I became interested in radio and electronics in my early teen years when I built a shortwave receiver and then earned a Novice amateur radio license (KT20). Progressing up the amateur ranks went hand-in-hand with learning about physics, and earning advanced degrees in electronics and communications technology.

"Eric has been the outstanding treasurer since my joining the Club. He deserves an award for his professional approach and informative presentations to the board."

– Bill Endres (F)

What do you see as being your biggest accomplishment during your career?

I feel fortunate to have had a number of interesting and satisfying experiences in the field. If I had to choose a "Number One," it would have to be my roles as a co-founder of a broadcasting equipment company and a contributor to the design, manufacturing and marketing of the first commercial generator for multichannel television sound. Known by the acronym "MTS," it includes what are commonly known as stereo TV sound and second audio program (SAP).

"Who gave Eric permission to retire? He's too young to retire. Besides that, the Club needs him. Eric is a stand-up guy who, in 1997/98 during my presidency, stood up against those who wanted to change the Club's investment methods. Can you imagine – based on the stock market's heavy downturn in 2000/01 – what would have happened to the Club's assets? Thanks to Eric – and others – that did not happen."

- Ray Trott, president emeritus

Who was the most interesting or influential character you encountered during your career?

Aside from Fred Link, the person who most impressed me was Mr. W., a marketing manager who had the ability to understand the needs of a market segment, and how to identify and create the product/service combination that would transform the opportunity into a thriving success. In one instance, he identified an operational communication need of a large segment of the transportation industry. He approached those companies and crafted a plan to outfit them with a tailored system that would give them effective communications between their operators and controllers.

Engineering the package from product modules to construction of the relay stations, he used wellknown techniques within his company. The answers were latent, and all the professional business mavens in the firm had not foreseen the incredible opportunity Mr. W. developed for them. The life cycle lasted more than 20 years, and the total revenues were in the high multimillions. He is one of the very few "marketers" I have met.

"One of the rewarding aspects of Radio Club membership has been the opportunity to associate with and get to know members like Dr. Eric Stoll. Eric's dedication to the task of treasurer has been admirable in a number of ways, including his attention to the details that have kept us a legal non-profit organization and his always-available reports on financial condition. In addition, he has found the time to participate in Club-sponsored amateur-radio activities. Eric's contributions are many and deserving of gratitude from all RCA members."

– Ken Hoagland (F)

What has been the most surprising product or service you've seen in your years in the wireless industry?

There are many important products which I've witnessed in my career. Here are my picks: Certainly the transistor, which gave us miniaturized, high-reliability electronics. It was at the foundation. It was followed by the integrated circuit, which again compressed things an order of magnitude or more. The microprocessor, which spawned the personal computer, and the associated software that gave it incredible value were two more pivotal products. Finally, the portable two-way radio and its sophisticated offspring, the cellular telephone, have changed our lives forever.

When and where did you first meet Fred Link?

I attended the 1975 Awards Banquet with Gene (W2KFA, now SK), who was presented with a special award by Bill Eitel (W6UF, now SK). There, I met Fred, Eitel, Art Collins and others, and I joined shortly thereafter. My strong interest in ham radio opened my eyes to the Club. Later, I was introduced to the Executive Committee by George Apfel (W2GHV, now SK) and started my activity in the treasury functions with the encouragement and support of Fred Link and Ed Weingart (WA2DFM).

If you had not chosen communications as your career, what other field would you have entered?

I've always had a strong interest in mechanical

things. Had I not gone into electrical engineering, I likely would have focused on mechanical engineering.

If you were sitting with a group of young telecom students today, what would you tell them?

Always a proponent of doing what you "like" because you'll have a good chance of doing it well and enjoying it, I would offer that our dynamic industry is presenting us with an unparalleled array of opportunities to create and provide new products and services. The evolution of solid-state electronics and the growth of the computer have given us components and tools to transform our communications systems for higher capacity, new services and lower costs.

After such a long career, what are your plans now for retirement?

I'm thoroughly enjoying my current responsibility as systems engineer for space-based communication and navigation systems. Although officially a "senior citizen," I have no plans to retire. I'm having too much fun!

"Eric is a wonderful person and has devoted many years to the Radio Club. He is very professional, helpful, and knowledgeable. Any question you have, he has the answer to. We will truly miss him as an officer."

– Karen Clark (F)

What is your best advice for the Radio Club of America and its members?

I remember it being said that advice is worth exactly what you pay for it. With this risk in mind, I would urge the Club to redouble its efforts to engage and attract the most talented contributors to the diverse electronic communications field in which we so happily find ourselves participating.

"Eric Stoll's professionalism and integrity has long been recognized and appreciated by all members of the Radio Club who have had the pleasure working with him. Eric represented the RCA's interests forcefully and faithfully while maintaining the trust of our members. He was willing to put forth that extra effort to work for the Club, not only as treasurer but his service on other committees as well. I hope we will continue to earn his spirited participation and unquestioned integrity."

- Mal Gurian, president emeritus

In Memoriam

William F. Lieske Sr.

William F. Lieske Sr. (M, 2000), W7GLT, died Jan. 9, 2007. He was born in Buhl, Minn., on June 15, 1923, the eldest son of William and Eva Lieske.

Radio was the passion of his life. Lieske earned his amateur radio license, W7GLT, when he was 13. He served in the Army Air Corps in World War II and finished his military service as a radar instructor.

Lieske got started in the RF business with the State of Oregon Highway Department radio communications division. His ability and talent brought him to be the head of the department, and he supervised the construction of one of the first modern public safety radio systems. He then went work for Motorola in local and government sales, leading to a transfer to California to continue in executive sales, specializing in public safety telecom systems. His work for Motorola eventually brought him to Arizona.

Lieske left Motorola to work a few years as a radio-industry sales rep and as a real estate agent/broker. He then went to work for RJ Communications, a small RF filter manufacturer in Phoenix. In 1980 he founded his own company, EMR Corporation, a radio filter manufacturer now doing business in North Phoenix. Lieske was a scientist, known for innovative designs and a practical approach to land mobile radio communications system design, maintenance and operation.

While never a member of the Radio Club of America, Lieske received the Fred M. Link Award in 2005 "for substantial contributions to the advancement and development of land mobile radio communications."

He is survived by his wife of 61 years, Lorene; his son William Jr. and wife Robin; grandson Noah S. and wife Alison; grandsons Eamonn B. and Lee T.; and great-grandson Sebastian William Frazier Lieske. A celebration of Bill's life was held in Glendale, Ariz., on Jan. 27, 2007.

Loren R. "Mac" McQueen

Loren R. "Mac" McQueen (M, 1969; F, 1975; L, 2001), 81, died Jan. 20, 2007, of complications from a neck injury he suffered during a fall. McQueen joined the Radio Club of America in 1969 and became a Fellow in 1975. He was a member of the board of directors from 1979 to 1999, and he received the Club's Special Services Award in 2001.

McQueen was president of Communication & Control of Campbell, Calif., an antenna-site developer and site management company whose original name was Umunhum Development Corp. It provided communications sites and services to the rural area of Santa Clara Valley and the Monterey Bay from family-owned property on Mount Umunhum near Almaden, Calif.

The Allison Development Company was established in 1961 to create and manage a communications facility on a leased site on Mount Allison near Fremont, Calif. In 1965, the two companies were combined under the name Communication & Control Inc. (CCI). In 1969, CCI purchased the 25-acre lease on Mount Allison, making it unique as the only site on private land on the Mission Ridge.

In May 1996, McQueen put the land he owned on Mount Umunhum in trust for the Boy Scouts.

Gregg D. Miller

Gregg D. Miller, (M, 1994; F, 2002), K0LVB, died Oct. 22, 2006, at his home in Marshalltown, Iowa. In 2005, he relinquished his membership, perhaps due in part to the diabetes that had limited his ability to travel and even the amount of energy he could bring to daily activities.

Adapted from the Racom Web site: "He founded Racom in 1972 as the culmination of his lifelong interest in radio. He designed a number of innovative communication systems. In 1993, Gregg acquired Enhanced Specialized Mobile Radio (ESMR) licensing and in 1994 began construction of a network that extends across lowa, western Nebraska and South Dakota, and into Wisconsin and Illinois. The network enables wide area voice and data communications to and between public safety and governmental agencies and commercial enterprises.

"Gregg studied physics from 1960 to 1963 at Iowa State University. He served as chairman of the Iowa State University Engineering College Industrial Advisory Council. He served as chairman of the MWCA Council of PCIA and as a member of the Board of Trustees of the Marshalltown Medical and Surgical Center. He was serving on the Board of Trustees for Buena Vista University. Gregg was an amateur radio operator (KOLVB) and a helicopter pilot."

Harrison W. Moore Jr.

Harrison W. Moore Jr., (M, 1988), W2JQS, of Bronxville, N.Y., died at age 88 on Jan. 16, 2007. He was first licensed as a ham radio operator in 1936, while he was in high school, and he kept this key active into his Eighties.

Harry enlisted in the U.S. Army in January 1941 as radio instructor ranked Private First Class in the 186th Field Artillery Battalion. He was commissioned directly as a second lieutenant in the Electronics Training Group (ETG) Signal Corps from Fort Ethan Allen, Vt., to Fort Monmouth, N.J.

Four days after Pearl Harbor, Harry was sent to England for three months training in the British Radar School in Petersham, Surrey. Harry was posted to Cardiff, Wales, to install 12 150-mm searchlights with SLC radar. He served until the end of World War II at Wright Patterson Air Force Base in Dayton, Ohio, as officer in charge of ground radar supply for the entire AAF. Harry served a total of 41 years, ending as a colonel and commandant of the 2086th Army Reserve Service Unit, Norfolk, USAR School.

His civilian career included positions as a sales manager for Fisher Radio in New York City; working for WBSM in New Bedford, Mass.; and WTAR AM and FM, Norfolk, Va. He also was the owner-manager of WRVC FM, the classical music station in Norfolk, Va.

Harry was always active, even during his retirement, with many friends and associates in such organizations as the Quarter Century Wireless Association (a communications group where he served two terms as president and was active for more than 20 years) and the Old Timers Club (a national group for ham radio operators who have been licensed for more than 40 years, where he served as vice president).

Harry is survived by his son Chris Moore and wife Mary Sue; and grandchildren Sally Elizabeth Moore and Daniel Harrison Moore.

Joe Conely

Joe Conely, (M, 1998), KO5F, died Dec. 27, 2006, at age 62. He graduated from North Carolina State University in Raleigh, where he was active with the student amateur radio society, W4ATC. Joe is survived by his wife, Danelle; his son Gary S. Conely; his sister Linda N. Woodhall and her husband Bob; his brother Richard B. Conely and wife Katie; and several nieces, nephews and cousins.

Kenneth D. Hopper (M, 1970; F, 1983; L, 2001) died Jan. 28, 2007.

Richard L. Plessinger Sr. (M, 1979; F, 1985) died at the age of 72 on Dec. 19, 2006.

Gary I. Eisenberg (F, 2001), WB2EQX, died Oct. 21, 2006.

Patrick E. Buller (M, 1991; S, 1998; F, 1999) died Sept. 18, 2006. A \$10,000 contribution was made to the Radio Club as the Buller Scholarship Fund.

Alphonso Avallone (M, 1956; F, 1991; L, 1993) died Feb. 12, 2006.

Alfred J. Mello (F, 1985) died Jan. 13, 2006.

The Radio Club of America, Inc.

TREASURER'S REPORT FOR FISCAL YEAR 2006 (October 1, 2005 – September 30, 2006)

CHANGES IN UNRESTRICTED NET ASSETS

REVENUES & GAINS	
Dues Collected & Applied	\$38,880
Other Member Fees	2,802
Advertising Sales	11,543
Banquet (net)	649
Interest on General Funds	15,682
Dividend / Capital Gain Income	7,630
Contributions	
- SW Section - members & sponsors	3,385
- Member Donations - SW Section	7,865
Net Realized Gain (Loss) on Investments	(99)
Net Unrealized Gain (Loss) on Investments	(4,531)
TOTAL UNRESTRICTED REVENUES & GAINS	\$83,806
NET ASSETS RELEASED FROM RESTRICTIONS	\$16,000
TOTAL UNRESTRICTED REVENUES,	
GAINS & OTHER SUPPORT	<u>\$99,806</u>
EVDENCEC	
EXPENSES	
Program Services	\$27 5 2 0
Management & Consultant Fees	\$37,520
Meeting Expense Pins & Plagues	18,620
1	457 2,034
Postage Printing & Stationery	2,034 6,972
Trade Show & Web Site Expense	1,790
Publications Printing	1,790
Publications Mailing Expense	2,742
Miscellaneous Program Expense	2,742
Grants	16,000
TOTAL PROGRAM SERVICES	\$96,463
TOTAL FROOKAWI SERVICES	\$90,403
Management and General Services	
Ballot Expense	\$976
Insurance	1,859
Legal & Accounting	2,000
Office Supplies	395
Telephone	1,037
Miscellaneous G&A Expense	855
TOTAL M'GT & GEN'L SVCES	\$7,122
Transfer Interest & Dividend Income to	
Temporarily Restricted Funds	\$15,023
TOTAL EXPENSES	<u>\$122,298</u>

(DECREASE) IN UNRESTRICTED NET ASSETS (\$23,122)

CHANGES IN TEMPORARILY RESTRICTED NET ASSETS

Grants and Contributions	\$17,753
Transfers from Unrestricted Funds	15,023
Restrictions Satisfied by Payments	
(Scholarships Awarded)	(16,000)
INCREASE IN TEMPORARILY	
RESTRICTED NET ASSETS	\$16,776
Increase in Net Assets	(\$6,346)
Net Assets at Beginning of Year	499,443
NET ASSETS AT END OF YEAR	\$493,097

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\$526,940

\$526,940

BALANCE SHEET

ASSETS

Current Assets	
Cash-Operating	\$52,797
Cash-Banquet & Section	29,977
Prepaid Banquet & Operating Expenses	4,500
TOTAL CURRENT ASSETS	\$87,274
Other Assets	
Investments	\$436,272
Inventory	3,394
TOTAL OTHER ASSETS	\$439,666

TOTAL ASSETS

LIABILITIES

Current and Long Term Liabilities	
Accounts Payable	\$6,071
Prepaid Dues & Advertising - Current	17,017
Prepaid Dues - Long Term	10,755
TOTAL LIABILITIES	\$33,843
Net Assets	
Unrestricted	(\$15,664)
Restricted	508,761
TOTAL NET ASSETS	\$493,097

<u>\$122,298</u> TOTAL LIABILITIES AND NET ASSETS

SCHOLARSHIPS AND GRANTS FUNDS

		Available for	
	Capital	Distribution	Totals
Opening Balance October 1, 2005	\$383,235	\$16,941	\$400,176
Contributions & Additions	11,557		11,557
Interest Earned		16,967	16,967
Scholarships & Grants Awarded		(16,000)	(16,000)
Ending Balance September 30, 2006	\$394,792	\$17,908	\$412,700

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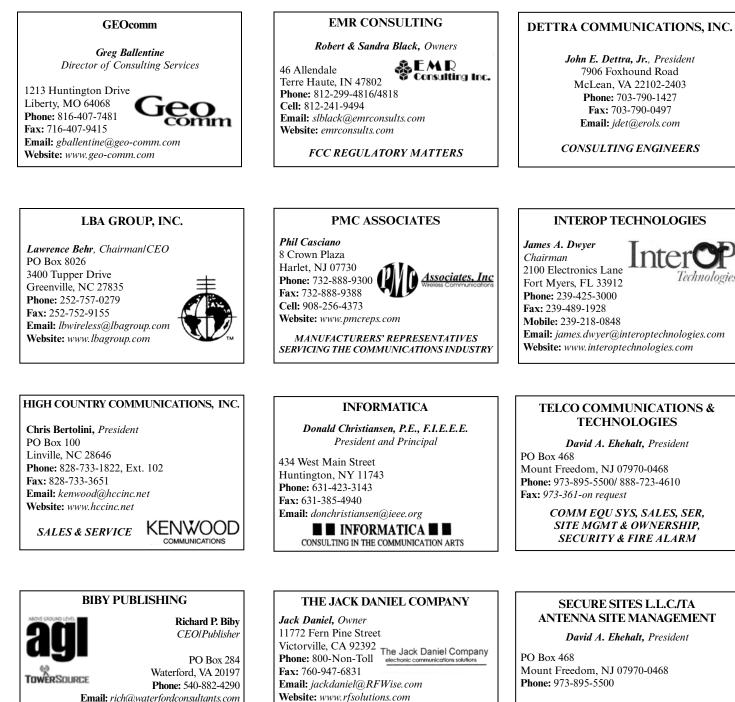
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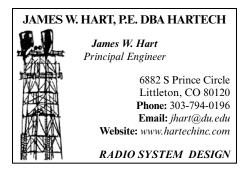
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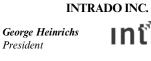


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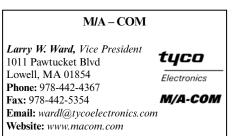
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The Radio Club of America, Inc. Awards Committee Major Award Nomination Form

The Club annually grants each of several major awards to members and non-members in recognition of outstanding achievement, and to provide inspiration for many people, both currently and in the future. As a member of the Club, your help in nominating and sponsoring candidates is appreciated. This form is provided to assist you in this process. In order to complete the grant process in time for the annual Awards Banquet in November, the Awards Committee prefers to receive nominations prior to April of the year of the proposed grant.

For each major award, the Awards Committee collects and evaluates all nominations then submits its recommendation to the Board of Directors for final approval by a majority of the Board.

To nominate someone for an award, please **legibly provide the information below** to the Club's Awards Committee in care of the Club's Executive Secretary in any of the following ways:

 Fax:
 (303) 972-1653

 E-mail:
 karen@radioclubofamerica.org

 U.S.P.S. mail:
 PO Box 621074, Littleton, CO 80162-1074

A. Name of RCA award:

B. Is Club membership required for this award?_____

C. Full name of candidate:

D. Is candidate a member of the Club?_____

- E. Proposed citation (between 5 and 25 words), based on why it is felt that this candidate should be considered: (to be published and announced at the presentation of the award)
- F. Attach supporting material such as an expanded explanation, a biography, a resume, and any significant published articles: (please list your attachments below)

Sponsor submitting this nomination:	
Full name:	Phone number:
E-mail address:	Fax number:
U.S.P.S. mailing address:	
Date submitted:	
PO Box 6	Radio Club of America, Inc. 621074, Littleton, CO 80162-1074 karen@radioclubofamerica.org ■ www.radioclubofamerica.org

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The Radio Club of America, Inc. Awards Committee **Fellow Nomination Form**

The Club annually elevates worthy Club members to the grade of Fellow in recognition of outstanding achievement, and to provide inspiration for many people, both currently and in the future. As a member of the Club, your help in nominating and sponsoring candidates is appreciated. This form is provided to assist you in this process. In order to complete the elevation process in time for the annual Awards Banquet in November, the Awards Committee prefers to receive nominations prior to April of the year of the proposed elevation.

Article I of the Club's By-Laws states the following:

- Section 6: Elevation or transfer to the grade of Fellow shall be by a majority vote of the Board of Directors.
- Section 7: A Fellow shall have been a member of the Club for at least five (5) years and/or a Senior Member for at least two (2) years and one whose contributions have been outstanding with extraordinary gualifications in the art and science of radio and electronics. The five and two years referenced above may be waived by a majority vote of the Board of Directors.
- Section 8: Elevation to the status of Fellow is by invitation only. If such person is not a Senior Member, his/her sponsor must submit a Senior Member form to the Executive Committee for recommendation to the Board of Directors

To nominate an RCA member, please legibly provide the information below to the Club's Awards Committee in care of the Club's Executive Secretary in any of the following ways:

Fax:	(303) 972-1653
E-mail:	karen@radioclubofamerica.org
U.S.P.S. mail:	PO Box 621074, Littleton, CO 80162-1074

- A. Full name of candidate:
- B. Proposed citation (between 5 and 25 words), based on why it is felt that this candidate should be considered: (to be announced at the presentation of the award)
- C. Attach supporting material such as an expanded explanation, a biography, a resume, and any significant published articles: (please list your attachments below)

Sponsor submitting this nomination:

Full name:_____

E-mail address:_____

Phone number:

Fax number:

U.S.P.S. mailing address:

Date submitted:

The Radio Club of America, Inc. P O Box 621074, Littleton, CO 80162-1074 303-948-4921 • Fax 303-972-1653 • karen@radioclubofamerica.org • www.radioclubofamerica.org

The Radio Club of America, Inc.



Founded 1909, New York, U.S.A. WORLD'S FIRST RADIO COMMUNICATIONS SOCIETY

The mission of The Radio Club of America is to provide a forum for the exchange of knowledge, recognize outstanding achievement, provide financial assistance to deserving students and preserve the history of wireless communications.

APPLICATION FOR MEMBERSHIP

TO: THE EXECUTIVE COMMITTEE

I hereby apply for \Box Regular \Box Retired \Box Student (*please check one*) membership in THE RADIO CLUB OF AMERICA and certify that I meet the requirement for the grade selected. I further agree that, if elected, I will be governed by the Club's Constitution and By-Laws as long as I continue to be a Member.

Date:			Sig	nature:		
Full Nan	ne:	(MIDDLE INITIAL)	(LAS	T)	(CURRENT AMATEUR C	
		(MIDDLE INITIAL)	(LAS	1)	(CORRENT AMATEUR C	ALL)
Home:	(STREET) (The above information is used for ma	ailings and your	membership directory	listing)	
(CITY)			STATE)			(ZIP CODE)
(PHONE)		(FAX)		(E	MAIL)	
		Please complete	REVERSE	SIDE as well.		
		ENTRANC	<u>e fee and</u>	DUES		
		\$185 includes \$135 for 3 rs, you will have the option to pay the annua		· ·	,	
	QUALIFICATION [After your initial 3 year STUDENT	\$100 includes \$75 for 3 y J: At least 65 years of age and furs, you will have the option to pay the annua \$30 includes \$20 for 1 y J: A full-time student at an accre	<i>Illy retired.</i> dues rate (cur ear of dues	rently \$32) or a disco	unted 3-year dues rate (cur	
RE	EGULAR & RETIR	* <u>For Non-U.S</u> ED: Please add \$45 surcharge			STUDENT: Plea	se add \$15.
_	neck enclosed	□ International Money Order en		_	Check enclosed	Credit Card
Visa M/0	C Amex Card number			Exp. date	Amt.	\$
Cardholde	er Name	Sigr	nature		Date	
Billing ad	dress for credit card					
Ū		E: The charge could appea	ar on you	r statement a	s "Marketing Con	nection"
A		d in U.S. funds, drawn on an U.S. ba Is, payable in the U.S. Checks shou				
	Th 303-948-492	Mail this application with the applica e Radio Club of America, Inc., 1 = Fax 303-972-1653 = karen@r	ble ENTRAN PO Box 62 adioclubofa	CE FEE (as indica 1074, Littleton, america.org = wv	ated above) to: CO 80162-1074 vw.radioclubofamerio	ca.org

The Radio Club of America was founded in 1909 by a group of the industry's pioneers, and is the first active electronics organization in the world. Its roster of members is a worldwide Who's Who that includes many who founded and built the radio industry.

The Club's objectives include promoting cooperation among individuals interested in electronic communications and in preserving its history. The Club administers its own Scholarship Fund to provide educational scholarships from tax-deductible contributions of the Club's members and business organizations.

The Club publishes and distributes its PROCEEDINGS twice a year.

Business:					
	(ORGANIZATION)			(DIVISION)	
(STREET)	(CITY)	(STATE)	(ZIP 0	CODE)
(PHONE)	(EXT.)	(FAX)		(EMAIL)	
IF APPLYING FOR STUDEN	MEMBERSHIP: Schoo	ol			Graduation Year
Birthplace:			Date of Birth:		
Education and memberships i	n other clubs and societ	ies:			
Present occupation					
Previous experience, indicate	approximate dates (a cu	rrent resume may be	attached to the applica	tion):	
In what particular branch of th	e communications art ar	e you most interes	ted?		
In what year did you become	interested in electronic o	communications?			
SPONSOR (optional) Please	list the name of a memb	per to whom you ar	e personally known.		
		,			
Recommendation of sponsor:	(optional)				
			ature:		
		Date:			

The Radio Club of America, Inc.



Founded 1909

WORLD'S FIRST RADIO COMMUNICATIONS SOCIETY

APPLICATION FOR SENIOR GRADE MEMBERSHIP

		Date:	
TO: THE EXECUTIVE COMM I hereby apply for the Grade of by the Club's Constitution and I	Senior Member of THE RADIO CLUB OF AMERI	CA, INC. and agree, if advanced to thi	s level, that I will be governed
	-	Full Sigr	nature
Full Name:			
(LAST)	(FIRST)		(INITIAL)
Home Address:	TREET)		
(3	irkei)		
(CITY)		(STATE)	(ZIP CODE)
(PHONE)	(FAX)	(EMAIL)	
	PRESENT OCCU	PATION	
(COMPANY OR ORGA	NIZATION NAME)	(TITLE OR POSITION)	
(STREET)	(CITY)	(STATE)	(ZIP CODE)
(PHONE)	(EXT.) (FAX)	(EMAIL)	
by each sponsor directly to The	SPONSOR required from two or more members (any grade) Radio Club of America, Inc., 10 Drs James Park	for sponsorship of Grade of Senior Me	1-1500. List Sponsors below:
2.			
		i	
Mail this application with the \$40	initiation fee to cover the cost of the Senior Grade C	ertificate and Pin (which will be mailed to	the address indicated above).
Check enclosed	International Money Order enclosed	Traveler's Check enclosed	d Credit Card
Visa M/C Amex Card number		Exp. date	Amt. \$
Signature	Billing address for	credit card	
(The charge could appear on yo	ur statement as Marketing Connection)		
	nds, drawn on a U.S. bank. International money oro Ild be made payable to The Radio Club of America		n U.S. funds, (more) →

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	EDU	JCATION		
Institution	Level Achieved	<u>Date</u>	Field	
	MANAGERIAL, PROFESSION RELATING TO ELECT			
PUBLICA	TIONS OF SCIENTIFIC OR PRO RELATING TO ELECT			
	OTHER B RELATING TO ELECT	ACKGROUND RONIC COMMUNICAT	IONS	
Professional Awards				
Professional Engineer's License	e(s)			
Other Professional Society Affil	iations & Grade of Membership			
Current Amateur Radio Call Sig	jn			
	eviously Held			
	FOR O	FICIAL USE		REV-042007
Date Application received:		Amount of Fee Receive	ed:	
Date Approved by Board:		Certificate & Pin issued	1 on:	

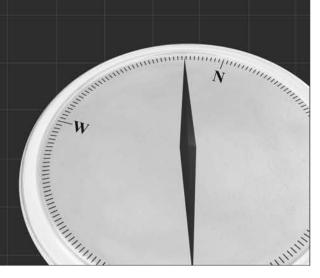
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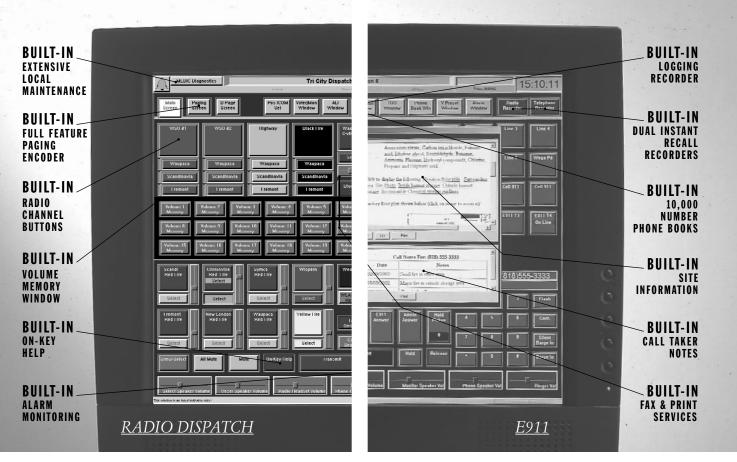
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- Adjust predicted field strength method
- Specify receive antenna height above ground level for mobiles, portables or ground based towers
- Choose matrix map extents
- Change field strength units
- Customize field strength color tables
- Create radio path profiles with the most up-to-date terrain data and field strength cross-plotted against terrain

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Type Channel Home Cage/Slot Hessage 1980 County LB 33 01/06 111 180 Loculus Rec Time: 11:00:20 Bate: 06/95/01 Torrison series descend pressure to mach series and ... Flows refer to the schematic ferries Graf, deming market TFRMA. 4 worldes the following components: mathematical programmits attematic legiting means laws by any statematic legiting means laws by any stat

The built-in MEDIC spots trouble down to the component

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customizes any screen to meet your needs. Buttons can be easily

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