

Sierra Signals

Sierra Foothills Amateur Radio Club
Auburn, CA
An ARRL Special Service Club

December 2007

P.O. Box 1005, Newcastle, CA 95658

The Weekend That Changed Amateur Radio

(Submitted by Greg, KO6TH)

Imagine a service, available 24x7, for exchanging messages from and to practically anywhere in the hemisphere. Sure, that's easy. Cell phones, and all sorts of other radio equipment can do this. Now imagine this service is *not* dependent on terrestrial infrastructure, atmospheric conditions, or monthly fees, and is accessible by nearly anyone with a ham license and a portable "terminal". That, in essence, was what was announced at the 2007 AMSAT Symposium, held this past October in Pittsburgh, Pennsylvania.



OFFICERS

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REPORTERS

Satellites: Greg, KO6TH

History: Gary, KQ6RT

Contesting: Fred, K6DGW

RESOURCES

REPEATERS

145.430 (-0.6 MHz/PL 162.2)

440.575 (+5.0 MHz/PL 94.8)

223.860 (-1.6 MHz/PL 100.0)

CLUB NET

Thursdays, 7:30PM, K6ARR/R

145.430

CLUB MEETINGS

Second Friday of the month,

7:30PM at the Library, 350

Nevada St, Auburn CA

CLUB BREAKFAST

Last Sat of the month at Susie's

Café, Cirby at Riverside, Roseville

- 8:00 AM

NET CONTROL OPS

Dave Jenkins, WB6RBE

Gary Cunningham, KQ6RT

Joe Sylvia, KF6OQY

Casey McPartland, W7IB

EDITOR

Deb Cunningham, KF6LXN

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Behind the scenes, and in private, members of AMSAT's board of directors and their engineering team have been in discussions with Intelsat, a corporation that builds and launches many of the major commercial geosynchronous communications satellites. Engineering and funding studies are on-going, but enough progress has been made that their plans could be made public.

(continued on page 2)

2007 Calendar of Events

(Operating Events in Italics)

[Dates are local unless otherwise indicated]

Dec 8-9	<i>ARRL 10 Meter Contest</i>
Dec 14	Regular Meeting – Christmas Party
Dec 15	<i>OK DX (RTTY)</i>
Dec 15	<i>RAC Winter Contest</i>
Dec 29	Club Breakfast
Dec 29-30	<i>Stew Perry Top Band Distance Challenge</i>
Jan 5	VE Session
Jan 11	Regular Meeting
Jan 26	Club Breakfast

We encourage members to receive Sierra Signals via email to save the Club the cost of reproduction and mailing

In Memory

Rob Carpenter

WW6G, sk

We'll miss you Rob.

Thirty Years Ago At The SFARC*(Reported by Gary, KQ6RT)*

December 8, 1977

A complete slate of officers were elected and changes to the by-laws were made as follows:

Meeting to be held on the second Thursday of each month at 7:30 P.M.

Dues to be \$12.00 per member with each additional family membership of \$6.00, and a student membership of \$6.00 up to and including 16 years of age.

Activities manager title to be changed to Activities coordinator.

A Technical committee chairman was created with the station trustee, K6ARR holding that position.

President: Carroll Evans, WB6DTI

Vice President: Floyd Worth, W6ZOH

Secretary: Al Schweigert, WB6HJM

Treasurer: Dick Lund, WA6HYO

Activities Director: Tom Mocan, WB6UBF

Station Trustee: Jim Carman, K6ARR

Tech Committee Chair: Jim Carman, K6ARR

WR6ADI/K6CBP also has a 220 repeater on the air with 222.26 in and 223.86 out with 223.5 as simplex

Present Secretary/Treasurer/Bulletin editor, Ken Weger WA6EMU, turned over all records to newly elected officers.

Respectfully submitted 10/8/77

Kenneth J. Weger, WA6EMU

73,

Gary - KQ6RT

Weekend...*(Continued from front page)*

What was announced was a project called "Phase IV Lite". The basic concept is to add a set of ham transponders to a geostationary satellite. The ham equipment would draw power, up to 400 watts of it, and be position and orbit stabilized by the parent satellite. We would have our own complement of antennas, our own controller, radio equipment, etc. The radio equipment and transponder electronics design would be based on work being done for AMSAT's Phase IV project, its next high orbit satellite.

The Phase IV transponder package is going to be amazing. In addition to several essential SSB/CW voice transponder, the satellite will include the "Advanced Communications Payload" – a digital package is being designed to allow a variety of digital services to be hosted. For stations with moderate power and a small "Dish-TV-style antenna, these include the possibility of compressed full motion video and high speed network (Internet) connectivity. Instant messaging and other lower bandwidth digital communications essential to emergency communications would be possible with much more modest ground stations. All this is the result of some truly leading-edge digital signal processing and state-of-the-art RF techniques. The ground station design will be part of the overall project, leveraging all that rocket scientist expertise to the rest of us.

The challenge. In order to be taken seriously as a design partner, the amateur payload for Phase IV Lite must be "up to snuff". That means a design that is robust enough to not only survive the launch into space, but one that will have a *minimum* design lifetime of 15+ years once it gets there. This will be a significant undertaking. Estimates are that it will be 4-5 times more expensive to achieve than the base Phase IV design, but it will also generate some significant rewards. In exchange for being hosted by another satellite, Phase 4 Lite won't have to worry about solar panels and batteries, attitude sensors and attitude control, rocket motors for orbit insertion and maintenance, and the reliability of all these systems in

aggregate (especially the rocket motors and batteries which have been the primary failure source of so many satellites).

But being hosted by a highly respected commercial satellite, a successful P4 Lite will bring to AMSAT, and Ham Radio in general, the credibility for such services as emergency communications to agencies we wish to serve. For the first time, reliable voice and data communications would be available anytime and anywhere within the satellite's footprint, manned by readily available trained operators, without the need for a complex and expensive van-mounted ground station. This is the aspect of the project which has the potential to "change the face of Amateur Radio", as one board member put it.

In many ways, this is also trip "back to the future". The earliest amateur satellites were all launched as "ballast" - electronics replacing the concrete block used to balance the satellite's thrust in order to achieve the proper orbit. Once the commercial builders realized what we were doing, they too wanted (and paid for!) those secondary launch slots. Hams turned to cooperative relationships, where the amateur payload was integrated into or bolted onto a commercial bird, sharing the satellite's structure and some systems, but remaining otherwise independent. This new adventure will be along these same lines, sharing the power, attitude control, and environmental systems with the host satellite. But, what a fantastic host satellite to share!

73s,

Greg KO6TH

From our Treasurer

Dues are due. Check your newsletter's last page for the sign up for 2008. Fill it in and either bring it to the Christmas dinner on December 14 or mail it to the PO box. Those that get the \$\$\$ to me before I leave for the dinner will get a FREE raffle ticket for the grand prize drawing of \$250 at the dinner.

A reminder that for every ARRL member who renews the membership through the club, we receive a \$2.00 kickback. Plus you save 41 cents postage. So, if your membership is coming up contact me for the information if you choose to go that route.

George

*KG6LSB

*The lame duck Treasurer

Contesting

The Sport of Amateur Radio

(Reported by Fred, K6DGW)

Selected Contests for December:

See Bruce's page at www.hornucopia.com/contestcal/ for a complete list. Sweepstakes is in the books as you read this, and December brings us the annual 10 meter contest. This is a great opportunity for Technicians to try out their HF privileges. Granted, 10 meters can sound a bit quiet with a spotless sun, but it was open and active for the sweepstakes weekends.

ARRL 10 Meter Contest: 8 Dec 0000Z – 9 Dec 2400Z
www.arrl.org

OK DX RTTY: 15 Dec: 0000Z --2400Z
www.crk.cz/ENG/DXCONTE.HTM

RAC Winter Contest: 0000Z-2359Z
www.rac.ca/service/infocont.htm

Stew Perry Top Band Distance Challenge: 29 Dec 1500Z – 30 Dec 1500Z
jzap.com/k7rat/stew.html

Contest Chatter:

We've covered these in past years so we'll forgo a rerun ... except for the rules for the OK RTTY which have changed just a bit. You no longer multiply your score by the number of OK stations worked [that's "OK" as in the Czech Republic, not Oklahoma]. This is good for us because under the old rules, unless you worked at least one OK, you ended up multiplying your score, however large, by zero.

Non-Contest Chatter:

I actually made it to a club meeting in November [gasp!], and asked the question, "How many here compete in HF operating contests?" As I suspected it would be, the number of hands raised was, shall we say, limited. OK ... it was two ... Jettie and one other who said he didn't really compete, he just used DX contests to find and work new ones. When Debbie kindly assumed the editorship of Sierra Signals from me, I was acutely aware of the "content problem" faced by all editors – "everyone likes to read it, few like to create it." Hence this column, starting in May 2005. It has now been a little over two years, the contest schedule is a repeating calendar each year, we've been over them at least twice, and this is the last month of 2008, so this will be the last "Sport of Amateur Radio" column.

Debbie does still have the "content problem," and someone at the meeting told me he enjoyed the few little stories I've encountered in 54 years as a ham, so I'll occasionally offer something to her, beginning with this one. It is not related to ham radio, but it's important to me and while I have a captive audience ...

The SFARC has on several occasions put together packages and sent them to one of our deployed troops. At the meeting I offered my thanks to you on their behalf. You didn't send



pregnancy and childbirth. We were discussing this after the meeting and she said, "Why don't you tell them about Idaho?" I guess it's worth a shot.

From early 1964 to the end of 1967, I was a USAF 1Lt leading an airborne combat communications team in the two Vietnams, Laos, and a little in Thailand. Our organization's mission was to provide comm and various flight facilities to all the services and agencies, we did this in teams, and it was virtually impossible to go anywhere in the theater and not run into our guys. I and one other 1Lt had the two jump-rated teams. When on a base, usually staging our gear for the next mission, we didn't have to carry weapons, could wear regular fatigues, and most units had baseball caps with their unit name embroidered on the front. Ours were black and I'm wearing one in the photo. The unit name led to our nickname, "1 Mob."

One of my troops was from a very small town in Idaho where he had a wife, a 2-yr old son, and a Mom, Dad, and little brother. Terry got quite a bit of mail, and he had sent two of our black hats home for his son and brother, along with our names. The little town adopted us, and we began to get packages from them weekly just as we began a 3-month mission in the extreme NW of South Vietnam on the border with Laos. We were alone and fairly lonely and the packages were an incredible upper for everyone. They sent things to read, puzzles, snack food, and the like, all packed in pop corn which we ate too. We were refueled by helicopter weekly and there'd be a new Town Package in each mail sack. Each package would have a bundle of letters, one for each of us, and each time your letter would be written by a different family in town.

About half way through the mission, yet another Town Package arrived with all the usual stuff. In addition, there was an envelope with an 8x10 photo. It had been taken in front of the bleachers on the ball field at the school. Terry's wife was in the center of the front row holding their son. His Mom, Dad, and brother were seated on one side of her. There was a sign on her other side that said "TERRY." The rest of the front row had signs with all of our names on them. The entire town was

seated behind, and everyone in the photo including babies and two dogs were wearing our black hats.

We needed to drink all the water we had and thus we and our clothes were incredibly filthy. As a team, we had maybe 15 combat missions under our belts by then, were fairly tough and hardened, and our humor was somewhat dark. I had already lost 2 of my troops, we needed to defend our site on many nights, and we were pretty fatalistic, beat up, and jumpy. That photo reduced all 23 exceedingly scruffy troops to tears.

So thanks for taking the time to send some support to our troops. One expects to get supportive mail from family [although my Greg got very little and TJ, who had grown up in foster care, got none]. When you get a supportive letter or package from American strangers, it means the world to you. Except for the town, all of our "surprise mail" was addressed to "Any Serviceman, APO San Francisco," and we never got a second package from the same person. Today, you have to address mail to a specific troop and mail the package at the Post Office, but if you adopt one, you'll get to know your troop. In combat, everything is shared so you will really be supporting your troop and his/her comrades as well. Don't know of any troops? Point your computer at anysoldier.com and pick one.

The end of this story actually does occur in Idaho, some 20 years later ... maybe next month.

73,

Fred K6DGW

November Meeting Minutes

(Reported by Leslie, K7NYE)

Minutes of the SFARC Board and General Meeting, November 9th, 2007 at the Auburn, CA main library:

Board of Directors meeting began at 6:57 PM with a quorum of officers and directors in attendance. New business included getting liability insurance renewed for the club, planning for the annual Christmas party and final preparations for the club's officer election. There was no old business discussed. Meeting was adjourned at 7:20 PM.

SFARC General Meeting Minutes:

7:31 PM Meeting started by SFARC Club President, Don Hay, WB6LPJ. Meeting started with Pledge of Allegiance, Introduction total of 32 members and guests in attendance; A tribute to Rob Carpenter, WW6G, was made by several club members, including Bob, WA6ULL, and a moment of silence was held to honor Rob's remarkable life and contributions to SFARC over the years.

New Business included a vote to pay \$320.00 for liability insurance renewed for the club, which was passed unanimously. The club also voted on allocating \$250.00 of the \$500 + receipts from the White Elephant sale as a grand prize for the Christmas party. This was also approved unanimously. Another \$200.00 was voted by the club to donate to the church in Newcastle for the Christmas party venue. Volunteers were

also solicited for both set-up and clean-up for the Christmas party.

Elections were facilitated by Richard, WA6RWS. The President (for his second term) is Don, WB6LPJ. The club elected Casey, W7IB for Vice President, for Wayne, W6DT for Secretary, Leslie K7NYE, for Treasurer; Directors include Jim KIZAZH, Chuck KG6FFK and Norm W6AFR.

Old Business: Don, WB6LPJ mentioned the importance of being an ARRL member; George, KG6LSB mentioned that dues for 2008 are \$22.00 for individuals and \$27.00 for 2 members of a family.

Presentation: Fred Jensen, K6DGW provided an informative and interesting presentation about the PAVE PAWS ("Phased Array Weapons System") at Beale AFB and its potential impact on the local amateur ham spectrum. Fred described the components of PAVE PAWS, the background and significance of the Pave Paws system, as well as its technical specifications. Fred supported his talk with much relevant detail that helped the audience understand the importance of Pave Paws and why amateur radio is affected.

Gene, KG6NYH held the monthly Drawing. Meeting was adjourned around 9:40 PM.

Respectfully submitted:

Leslie, K7NYE

Secretary

Upcoming Events

(Submitted by Pat, AA6EG)

Folks:

Coming up in December and January, are some events that may be of interest to the ham community. Stanford U students, Cal Poly students, and others; most of whom are also hams, periodically launch high altitude (to 100,000 feet) helium balloons carrying science experimental packages including ham radio frequency beacons, repeaters, cameras, and APRS /GPS equipment to assist in offloading telemetry, Tracking, and live digital photo data, and to assist in DF team recovery efforts. One such team is known as Stratofox. <http://www.stratofox.org> A note below, announces upcoming Stanford Launches on December 15, and January 18-20

Some of the associated activities, include observing, documenting, and assisting in balloon launch activities, mobile computer/WIFI/Internet usage for APRS/ Winds Aloft modeling/packet radio/telemetry monitoring, chase teams who track the balloon flight, (chase comm coordination via anything from Ma Bell, WIFI internet, VHF and UHF ham radio, etc) and recover payloads, and have pizza afterwards.

The events may involve volunteer workers, putting large numbers of miles on chase vehicles, including aircraft, at their own expense, possible overnight stays, in austere environments, (anything from sleeping bags, to Motel 6, to sleep in back of your vehicle.) Think and BE PREPARED for field day, or ARES type environments, if you want to participate fully. These events may evolve from locations

anywhere from the Central Valley CA (typically Casa de Fruta) to Black Rock Desert, Nevada.

If you google Biolaunch or Stratofox, or "high altitude Ballons" you will see sites with a lot of prior art details of such events. Particularly on You Tube, you can find video records and photos from high altitude.

If you are interested in volunteering for some degree of participation, contact matt.maniscalco@gmail.com, the Stanford PI of these events. Please cc me also (Pat, aa6eg@hotmail.com)

Also, if you visit the Stratofox website, and want to know more about Stratofox, contact Ian Kluft of Stratofox ikluft@thunder.sbay.org. Stratofox will be in charge of ground chase/recovery operations.

All the Best, 73,

Pat Barthelow aa6eg@hotmail.com

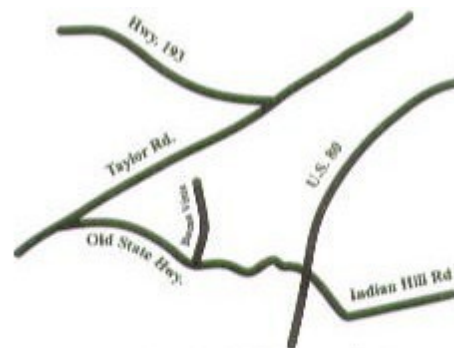
For Sale

Hunter "Bandit" 2,000 watt amplifier for sale. 10, 15, 20, 40 and 80 meters. Contact Doug Horton, WB6HEV, 916-961-4726.

Directions to Christmas Party

From Sacramento: Take Hwy 80 East toward Reno. Exit Newcastle Rd./Indian Hill exit. Turn left at the light onto Newcastle Rd. Go over the freeway, the road will bear to the left and dead end at Old State Highway. Turn right on Old State Highway (the road will take a few curves) and then turn right on Buena Vista. The church is on the left about a block from the Old State Highway.

From Auburn: Take Hwy 80 West toward Sacramento. Exit Newcastle Rd. exit. Turn right onto Newcastle Rd. The road will bear to the left and dead end at Old State Highway. Turn right on Old State Highway (the road will take a few curves) and then turn right on Buena Vista. The church is on the left about a block from the Old State Highway.



P.O. Box 236, 410 Buena Vista
Newcastle, California 95658
916-663-2250

SIERRA FOOTHILLS AMATEUR RADIO CLUB

P.O. Box 1005

Newcastle, CA 95658

PLACE
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HERE

SIERRA FOOTHILLS AMATEUR RADIO CLUB
2007 MEMBERSHIP APPLICATION

Name: _____ Call: _____ Class: _____ e-mail: _____

Address: _____ City: _____ State: _____ Zip: _____

Associate Name: _____ Call: _____ Class: _____

Phone Number: _____ Application: (Circle One) New Renewal

Member Dues: Circle Amounts That Apply. Applications (for new members only) received in the middle of the year will be pro rated. Contact the President or Treasurer for exact rate.

Membership:	\$22.00	Name Badge:	\$7.00
Associate:	\$ 7.00	Repeater Donation:	\$ _____
Auto Patch Donation:	\$ _____	Newsletter Booster:	\$ _____
Miscellaneous Donation:	\$ _____	Christmas Donation:	\$ _____
Worldradio Renewal:	\$ _____	TOTAL:	\$ _____

OFFICE USE ONLY:		DO NOT WRITE BELOW THIS LINE	
Date: _____	Treasurer: _____	Secretary: _____	Roster: _____
Payment: _____	Check Number: _____	Cash: _____	