

Sierra Signals



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

<http://www.sf-arc.org/>

OCTOBER 2009

PO BOX 1005. NEWCASTLE. CA



At the key of SFARC

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norm.linda@surewest.net

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amartin4@wavecable.com

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REPORTERS

Satellites: Greg, KO6TH
History: Gary, KQ6RT
Misc Radio: Fred, K6D6W

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, W6EK/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
Norm Medland, W6AFR
Casey McPartland, WTIB

NEWSLETTER EDITOR

Matthew Diridoni, KC6RUO
916-749-3032
matteod@comcast.net

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F

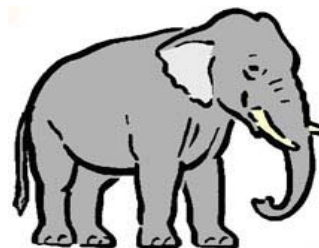
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Calendar of Events



10/9/09

**SFARC WHITE
ELEPHANT SALE**
Location and Directions
on page 7

10/3 & 4/09

California QSO Party
www.cqp.org

10/31/09

Happy Halloween!

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October Meeting Program

The "TechTen" topic will be introduction to Human RF Exposure and Amateur requirements.

The meeting presentation is the White Elephant Sale. Donate electronics and ham radio related items members might be willing to buy. The proceeds go to the club and have traditionally funded the Christmas Dinner.

Bring a friend, visitors welcome!
See you all there!

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

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Miscellaneous Radio

By Fred K6DGW

“Zones, Continents, and Countries”

Of all the operating awards available to amateurs, some are more prestigious than others. For example, the No. California Contest Club offers a “Worked All California Counties” award. On the prestigious scale, it ranks near the bottom (I’m the administrator for it for NCCC). There are 58 counties, and many stations worldwide manage to work all 58 during the California QSO Party which, by the way, is coming up on 3-4 October. (See the end of this article for the mandatory commercial) On the other hand, the Worked All Continents award offered by the IARU is the oldest award, dating back to the mid-20’s. To get it you have to submit QSL’s from stations operating in the 6 continental areas of the world. We normally think of “continents” as “big land.” There are lots of islands and small countries surrounded by water that aren’t normally classed with continents, however the IARU has arbitrarily decided that they either belong to a nearby continent, or in the case of the “continent” Oceania, are part of a sort of made up continent. Greenland (OX) and Panama (HP) are part of North America, as is Cuba (CO). However, Aruba [P4] is part of South America since it’s only about 35 km off the coast of Venezuela (YV). WAC isn’t real hard these days, but it ranks near the top of the prestigious scale because of its age. WAC information is at iaru.org

The next oldest operating award is the Worked All Zones award which is celebrating its 75th anniversary in November and if not at the top of the prestigious scale, it is #2 behind DXCC. It originated at R/9 magazine in 1934 and predates DXCC by at least a year. An award for working countries seems like an intuitive thing, but the R/9 editors realized that there was an inherent unfairness in that concept ... the geographic density of countries varies widely between various regions of the world. Europe is dense – many countries, small area. North America is vastly less dense, and working some number of countries from NA was a lot



harder than it was from Europe. If you happened to live in northern Siberia, you were surrounded by Russia for as far and the eye [and radio waves] could see. And remember, in

the thirties, radios were a little different than they are now and transoceanic contacts were much more difficult than today.

So, the editors took a long look at a world map and arbitrarily divided the planet into 40 “zones” with the goal of equalizing the difficulty of working all 40 regardless of which zone you were in. This made it about as hard to achieve the award if you lived in Liechtenstein (where you could likely walk to several other countries), as it did if you lived in Siberia or North America (where the nearest other country might be 1,500 km away, if you were lucky). It worked and the award became very popular, partly because of its difficulty. In 1945, R/9 magazine became CQ Magazine which took over administration of the award, and the zones laid out by the R/9 editors became “CQ Zones.” They are part of the exchange, and multipliers, in all CQ DX contests except WPX (where the call prefix is the mult).

I got the map at the Yaesu booth at a Pacificon, and all the pins are countries I’ve worked (but not necessarily confirmed ☺). The right edge is cut off a bit by our Iraq/Iran/Afghanistan map on the wall. Go to www.cq-amateur-radio.com/wazrules.html for the real info on who’s in what zone. We’re all in CQ zone 3, the rest of the US includes zones 4 and 5, Alaska is zone 1 along with some of Canada, and KH6 is zone 31.

CQ Magazine does not have a monopoly on zones however. The International Telecommunication Union was founded in the mid-19th century to coordinate the international aspects of the telegraph. In fact, it was originally the International Telegraph Union. Today, it is part of the UN and it’s role has expanded over the years to include telephone, radio, broadcast, satellite orbits, and just about anything that involves communication internationally. The ITU is responsible for the fact that our call signs begin with A, K, N, and W, for the fact that no call signs begin with “Q”, for the allocation of our bands, and, among a host of other things, for dividing the world into ITU Regions and Zones. The ITU is headquartered in Geneva, and the International Amateur Radio Union is a member society of the ITU and represents us and our interests there. ARRL is a member society of IARU, and in fact serves as it’s headquarters in Newington CT too. (Continued on page 3)

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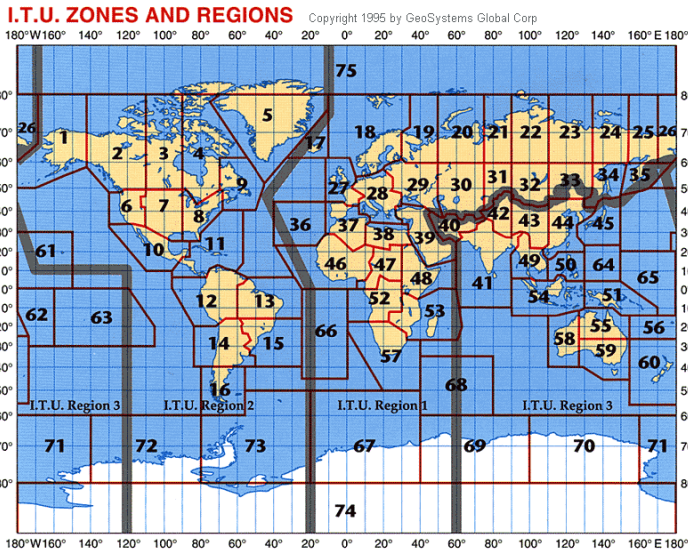
Fri: 8:00-8:00

Sat: 8:00-6:00

Sun: 10:00-5:00

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ITU divides the planet into three Regions. Region 1 is roughly Europe, Africa and what used to be the Soviet Union. Region 2 is the Americas plus Greenland, and Region 3 is all the rest – China, South and Southeast Asia,



Australia, Japan, Philippines, and the South Pacific. Then, in a fashion typical of international bodies, they divided the planet into what appears to be 75 zones that are not all subsets of each region. I say “appears to be” because there are some all-water zones. I’ve seen maps with zones up to 81. The one here has only those zones that include land of some form. We are in ITU Zone 6, something that you need to know if you plan to operate in the IARU contest next year.

The ITU zones were drawn politically, like our Congressional districts, and they don’t reflect the density of countries. In fact, some countries occupy several zones ... us, Canada, and especially Russia. And, as I mentioned, there are a few all-water zones (they aren’t numbered on this map). As a result, the concept of “Worked All ITU Zones” is pretty much a non-starter.

Worked All CQ-Zones is achievable, many have over the years that the award has been offered, but it is by no means easy. I’m about 80% there, and I’ve got some tough ones to go. I guess that’s what makes it a challenge.

I really hope this gets to all of you before the CQP on 3-4 Oct. This is OUR contest, everyone wants to contact you! NCCC normally gets something around 700 CQP logs each year and the number is rising. It’s the premier state QSO party in the country. The website is www.cqp.org and it has the rules and a list of the 4-character county abbreviations. Placer County is usually represented by a couple of stations but if you have HF capability, you can really be sought after by the rest of the country and world. Your exchange is a contact serial number and your county abbreviation (PLAC, SACR). For non-CA stations, you’ll get a state or province area abbreviation, there are 58 of them. You can work CA stations for credit, you do have to log their county abbreviation instead of “CA” however.

I will be at Monitor Pass working CW at N6A in Alpine county, my annual end-of-summer radio expedition. I hope to work you, we will split our time between CW and SSB so if you’re into SSB, that will work too. If we have an exciting expedition, like 2007, I’ll probably write about it on a slow ham news month.

73,
Fred K6DGW



11846 Atwood Road
Auburn, CA 95603
(right next door to Midas)
530.888.8483
dave@radiosupplyco.com

DON'T FORGET TO CHECK OUT OUR WEB PAGE

<http://www.sf-arc.org/>

Welcome to the Sierra Foothills Amateur Radio Club's Website

Please use the navigation buttons above to view our [site](http://www.sf-arc.org/)



POWER SUPPLY FOR SALE

Astron power supply model RS-70A. 57 amps key down 70 amps ICS. Like new condition with very little use. Lists for \$290 in the AES catalog. Asking \$190.00

John Webb W7GE 530-885-9556

REPEATER FOR SALE

Motorola MSF 5000 100 watt VHF commercial duty repeater. Unit is programmable, with software disk. Rack mounted inside a heavy gauge steel Motorola cabinet, 48 inches tall. \$500.00.

Dan Brockman, K6DNB, 530-682-7146. You may also e-mail radiogurus@sbcglobal.net

DX? Sure!

Richard Hill, NU6T

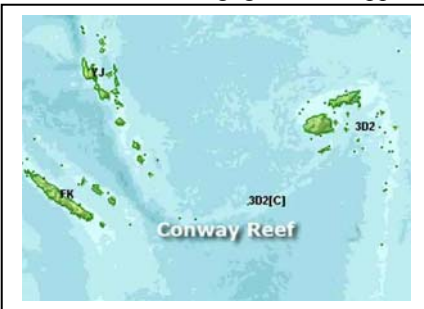
With the lack of sunspots lately, it can be hard to get excited about DX, but they are out there. Out here on the left coast, our better chances may be with pacific island DX, and there is a DXpedition to watch for, 3D2OCR on Conway Reef.

The 800 foot by 500 foot island was discovered in 1838 Royal Navy Captain Drinkwater Bethune of HMS Conway. Conway Reef is located 280 miles southwest of the Fiji Islands in the South Pacific at 21° 44' 18" S,



3D2CU/3D2CT Conway Reef DXpedition 1995.

174° 38' 24" E. It is roughly between Fiji and New Caledonia, north of New Zealand and east of Queensland Australia. That is not so far from Samoa and the September 29, 2009, 8.0 earthquake that sent a small Tsunami out across the Pacific. The Daily DX reported that the team is safe and unloading gear and appeared unaffected by the waves on Tuesday afternoon.



The operation is expected on the air from September 23rd until October 18th, 2009. The eight operators will have three Elecraft K-3's and

two K-2's plus a large selection of various antennas. For more information see their web page: <http://www.conwayreef2009.de/index.html>.

Frequencies expected:

	CW	SSB	RTTY
160m	1826.5		
80m	3505	3799	
40m	7020	7070	
30m	10104	---	10140
20m	14024	14190	14080
17m	18080	18145	18110
15m	21024	21290	21080
12m	24894	24950	24920
10m	28024	28490	28080
6m	50124	50124	

Go get 'em!, Good DX!
Richard Hill, Nu6T

Minutes of the Board of Directors Meeting



The meeting was called to order at 7:20 PM by vice president Al Martin, NI2U. A quorum was present.

A brief discussion of upcoming meetings followed. The Christmas meeting in December, our Christmas Dinner meeting will require volunteers to assist. The November meeting will be the election of officers and an election committee may need to be formed. The October meeting will be our White Elephant Sale and we need to remind members to bring items.

The board meeting was adjourned at 7:28 PM.

SFARC Membership Meeting

The meeting was called to order at 7:31 by vice president Al, NI2U.

The flag salute was followed by a moment of silence for the victims of 9/11.

Secretary Wayne, W6DT was called upon to give a summary of last meetings minutes. Leslie, K7NYE, our treasurer, reported that our coffers held \$1943.81 total but some of that was allocated for the new repeater. The telephone bill and the electric bill were remaining steady at \$14 and \$34 respectively. Al, NI2U, reported that the last VE session drew 8 test takers. He also suggested that since Joe, KF6OQY, and Dottie, K6DMS, have moved to Sparks, NV, we are looking for volunteers to be the Sunshine Committee.

Richard, WA6RWS reported that the repeater seemed to be working fine and we were just awaiting the final donation for the new repeater. Richard also gave an explanation of the White Elephant sale for newer members. It will be next month and people were encouraged to bring any electronics and ham radio related items members might be willing to buy. The proceeds go to the club and have traditionally funded the Christmas Dinner.

Al, NI2U, suggested people start thinking about how they could help and volunteer for the Christmas Dinner.

George, KG6LSB, reminded members that the motorcycle enduro held out at Georgetown could always use a couple of new volunteers to assist with the communication tasks.

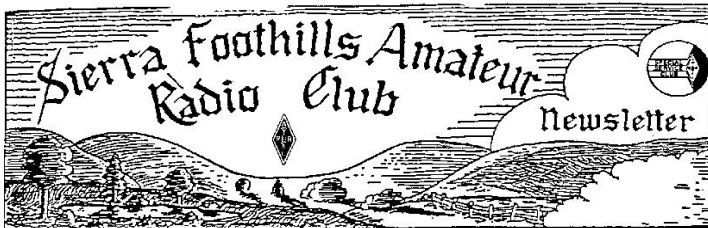
Introduction of members then occurred. Members were reminded that the club net was held every Thursday at 7:30 PM local time on the club repeater on 145.30 with a PL of 162.2. The club breakfast is on the last Saturday of the month at Susie's near the intersection of Riverside and Cirby in Roseville. All are welcome.

The Tech Ten, which turned into a Tech Thirty, was presented by Chuck, KG6FFK. He showed how to design circuit boards with the aid of a computer and demonstrated one such program and also showed an example of his previous work.

After the break, Chuck, KG6FFK, presented the main program by DVD, a Simulated Emergency Test that took place on the East Coast.

The drawing was held and the meeting adjourned at 9:15 PM.

Respectfully submitted,
Wayne Stilwell, W6DT,
Secretary



Fifty Years Ago at SFARC Meeting of October 7, 1959

Howard and Bob Davis given membership cards. Bob Hicks and Carl Rolufs won gift certificate. It was decided not to change dues.

Herb Hartman, an engineer from KCRA channel 3 to speak at next meeting. Talk may be on single sideband. December meeting on the use of the oscilloscope by Jim Carman. January meeting on transmitter of State Division of Forestry arranged by Bob Richier.

Respectfully submitted,
Walter G. Dowdy



Local ARRL Exam Sessions Courtesy of the ARRL

03-Oct-2009

Sponsor: UNSPONSORED

Time: 8:00AM (Walk-ins allowed)

Contact: LARRY R HODGE
(916)361-2476

Email: LARRYHODGE2000@COMCAST.NET

VEC: ARRL/VEC

Location: RALEY'S COMMUNITY EVENT CENTER
6845 DOUGLAS BLVD
GRANITE BAY, CA 95746

17-Oct-2009

Sponsor: RUBICON TRAIL FOUNDATION

Time: 9:00AM (Walk-ins allowed)

Contact: BARBARA D OLSON-ARENZ
(530)644-1135

Email: BDOA@COMCAST.NET

VEC: ARRL/VEC

Location: OAK RIDGE HIGH SCHOOL
1120 HARVARD WAY
BUILDING R ROOM R-105
EL DORADO HILLS, CA 95762

17-Oct-2009

Sponsor: RIVER CITY ARCS

Time: 7:30 AM (Walk-ins allowed)

Contact: KENNETH M HALL
(916)492-6115

Email: WO6J@ARRL.NET

VEC: ARRL/VEC

Location: CARMICHAEL ELKS LODGE-USE EAST
ENTRANCE
5631 CYPRESS AVE
CARMICHAEL, CA 95608

07-Nov-2009

Sponsor: UNSPONSORED

Time: 8:00AM (Walk-ins allowed)

Contact: LARRY R HODGE
(916)361-2476

Email: LARRYHODGE2000@COMCAST.NET

VEC: ARRL/VEC

Location: RALEY'S COMMUNITY EVENT CENTER
6845 DOUGLAS BLVD
GRANITE BAY, CA 95746

21-Nov-2009

Sponsor: RIVER CITY ARCS

Time: 7:30 AM (Walk-ins allowed)

Contact: KENNETH M HALL
(916)492-6115

Email: WO6J@ARRL.NET

VEC: ARRL/VEC

Location: CARMICHAEL ELKS LODGE-USE EAST
ENTRANCE
5631 CYPRESS AVE
CARMICHAEL, CA 95608



SFARC SATELLITE REPORT Greg Dolkas, KO6TH

South Africa launches Second Satellite

The country of South Africa has its second satellite now in orbit.

SumbandilaSat was launched on September 17th from Russia's Baikonur launch facility in Kazakhstan, on the third attempt after two previous launch countdowns were halted with booster issues. The third time was indeed the charm for this bird, as it now orbits comfortably 500km (310mi) above the Earth.

This is not one of those cute little "Cube Sats". Still considered a "microsat", the satellite weighs in at 81kg (178 lb), spans 1m by 0.5m in size (39 x 19 inches), and has a design life of 3 years. Think "large piece of luggage". I suppose it might fit in the trunk of your car, but perhaps like your luggage, you'd never be able to lift it out.

Compare this with a Cube sat at 4 inches on a side and weighing only 2 lb, something you can hold in your hand.

The satellite's primary mission revolves around a multi-spectral imager, a sophisticated camera that can resolve items on the ground (they call it the "Ground Sampling Distance) down to 6.5 meters, on 6 different wavelengths. Just as with your own digital cameras, the storage of all this data can be huge. There's a 24 gigabyte memory bank behind the camera, and a 72 megabit per second radio link to the ground to move all that data so we can see it. The images will be used in support of agriculture, the mapping of land use, and for measuring population, among other things. In order to properly aim the camera, the satellite has full ("3-axis") stabilization using small rocket jets.

In addition to the primary mission, there are a number of "experimental" packages on board, which are all part of a general initiative to build satellite expertise. Stellenbosch University (where the first South African satellite, SunSat, was built) contributed an "Architectural radiation experiment for commercial off-the-shelf devices" and a Software Defined Radio (SDR) experiment, and there is an experiment in VLF radio from the University of KwaZulu-Natal. Nelson Mandela

Metropolitan University sent up an experiment that was the result of an ad they placed in the Sunday paper for proposals. A student replied, and his experiment to study the vibrations of a string in micro-gravity was accepted. They call it their "violin project".

The Department of Communication worked with Stellenbosch University to include a low bandwidth digital messaging system which will be used to pass traffic between rural schools, clinics, and government agencies. Also on board is a voice beacon, recorded by a South African high school student.

Oh, yeah. There's also an Amateur Radio package on board, which shares the receiver and transmitter from the SDR experiment. It consists of a 2m/70cm FM transponder and parrot repeater that can operate in one of three modes. PL tones are used to command the transponder into either the "bent pipe" mode (where the 2m uplink is simply repeated into the 70cm downlink), or the Parrot mode, where the satellite listens for about 20 seconds remembering what it was heard, then retransmits it back down to the ground. A similar Parrot was flown on the recent K6RPT balloon flight in central California. If no activity on either mode is directed, then the voice beacon will be activated. While the specific PL tones have not been released as yet, the uplink is reported to be 145.880mHz, and the downlink where we all listen is on 435.350mHz. Both the repeater and voice beacon share the same downlink frequency.

If these frequencies seem familiar, they should. They are shared with the very popular AO-51 satellite, which should make for some interesting scheduling challenges when their orbits happen to cross. Drew Glasbrenner, KO4MA, who is one of the control operators for AO-51, has acknowledged the potential conflict. Since SumbandilaSat's frequencies have been coordinated, he says, and AO-51's were not, AO-51 will be the one to move.

SumbandilaSat is currently being tested and commissioned by its control team, a process that can take some months to complete. Once they are satisfied that all is working as planned, the Ham transponder will be turned on and access granted.

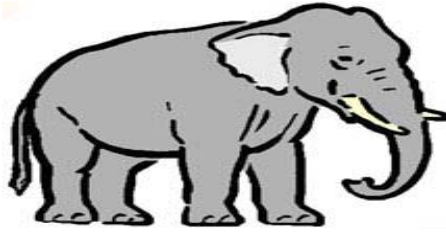
73s,
Greg KO6TH

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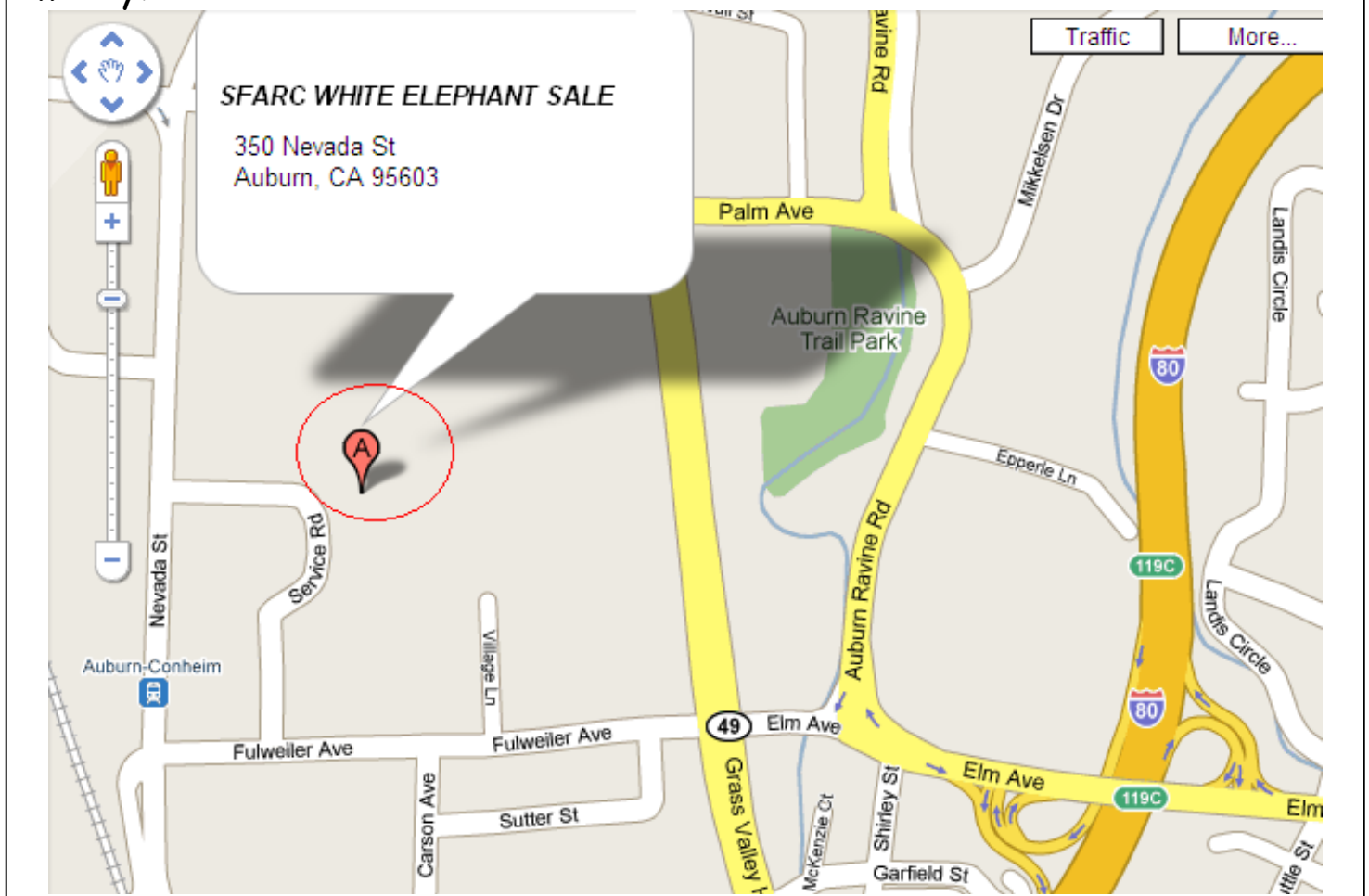
Carl Schultz, WF6J
caschultz@sbcglobal.net
(916) 366-7408

SFARC 2009 AMATEUR RADIO WHITE ELEPHANT SALE OPEN TO THE PUBLIC!



**Friday October 9, 2009 7:30 PM Auburn Library
350 Nevada St. Auburn, CA**

Auctioneer Extraordinaire **Len Taylor, WB6HGS**, will be there to "redistribute objects" while simultaneously entertaining all attending. This is a fund raiser for the club. Members can donate items for sale such as radios, antennas and all kinds of extra electronic stuff. Baked goods are also welcome! Come one, come all and bring some spending money!



SIERRA FOOTHILLS AMATEUR
 RADIO CLUB
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		TOTAL: (Y)	\$ _____

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