June 2012

County of Orange RACES

NetControl

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

The Next OCRACES Meeting is

June 4, 2012

1930 Hours

840 N. Eckhoff Street, Suite 104, Orange

Training for June 5th Primary Election Ballot Collection

Orange County Sheriff's Department
Communications & Technology Division

Captain's Corner
by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

New Products at Dayton

Here is a rundown on some of the new amateur radio products that were introduced at the Dayton Hamvention on May 18-20, 2012.

Kenwood introduced the TS-990S full-size HF/6-m transceiver. It includes a dual-watch receiver with dual TFT display, built-in spectrum scope, switching power supply, and automatic antenna tuner. Power output is adjustable from 5 watts to 200 watts. Modes include SSB, CW, FSK, PSK, FM, and AM. It also includes a COM port, USB A/B port, and Ethernet LAN port.

Kenwood TS-990S HF/6-m transceiver.

Another HF/6-m transceiver, the FTDX-3000, was unveiled by Yaesu. The mid-range-priced transceiver features a down-converting receiver based on the high-end FTDX-5000, and includes a built-in spectrum scope. A listening watch on the transmit frequency is provided during split-frequency operation. Three antenna ports include one that can be assigned to a receive-only antenna. Yaesu also showed a prototype of their FT1D 12.5-kHz C4FM FDMA digital handheld. It transfers data at 9.6 kb/s. A GPS antenna is built in. An optional mic includes a camera.

Yaesu FTDX-3000 HF/6-m transceiver.

FlexRadio introduced a software defined radio (SDR) architecture platform designed around networking for both internal and remote operation. The new SmartSDR architecture deployed with the SDR-6000 series of hardware modules allows multiple transceivers or receivers to be controlled centrally. The first units to be deployed will be the Flex-6500 transceiver (a single-port input unit supporting up to four virtual receivers and a 100-watt, 160-6-meter transmitter), the Flex-6700 transceiver (a dual RF port input unit supporting up to eight virtual receivers and a 100-watt transmitter), and the Flex-6700 receiver (similar to the receiver side of the 6700 transceiver, covering 0.3 to 77 and 135 to 165 MHz). The Flex-6700 also provides 0 dBm exciter output across its entire range, including 600 and 2 meters. The receivers promise a high level of dynamic range with a 45-dBm third-order intercept and 110-dB third-order dynamic range. Each system can include one or more of the above signal capture units with each virtual receiver able to be used for audio output, digital data output, or a virtual spectrum display of up to 384 kHz. Internal 1-GB Ethernet interface ports provide for seamless remote control via local connection or via the Internet.

OCRACES Participates at Golden Guardian

OCRACES Member Marty Oh, KJ6RWE, participated at the Golden Guardian exercise on May 15, 2012, at the Orange County EOC. The exercise scenario was a 7.8-magnitude earthquake. Marty prepared for the exercise by taking the Golden Guardian Overview course on April 19th.

Marty arrived at the Irvine Park staging area at 0745, and was transported by OCTA bus to the EOC on Loma Ridge. Because of the large number of participants, parking was at a premium at the EOC, and most participants had to be bused from Irvine Park. After arriving at the EOC, Marty and the others were treated to a light breakfast at 0800 in the break room. He reported to the RACES Room at 0820, and then attended the "all hands" meeting at 0820.

Returning to the RACES Room, Marty checked the OA1 radio (via the Centracom console) and, at 0930, conducted a roll call of Orange County Cities and special districts. At 1030, he conducted a roll call on TAN North. He also communicated via the EOC telephone system with OCSD Emer-

Marty Oh, KJ6RWE, at Centracom console during Golden Guardian exercise.

gency Communications Manager Marten Miller, KF6ZLQ, and OCSD Communications Training Officer Pat Campobasso, KF6PND, who were in the Operations Center. Marten functioned as a Controller/Evaluator for this exercise.

During the exercise, Marty monitored the OCRACES 2-meter repeater. He received several official press releases, but was instructed not to read them over 2 meters or on the TAN-N or OA1 channels.

Lunch was provided at 1200. An exercise review and evaluation meeting was held at 1400. Marty was impressed with the organization of the drill, and how more than 100 people knew exactly where to report and what their assignments were. He finally returned to Irvine Park at 1430.

Next OCRACES Meeting: June 4th

The next County of Orange RACES meeting will be on Monday, June 4, 2012, at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. At this meeting, training will be conducted for City and County RACES and MOU members who are providing communications for the Primary Election ballot transportation the following evening, June 5th. Also at this meeting we will review the May 19th City/County RACES drill and discuss our preparations for Field Day.

RACES/MOUs to Support Primary Election

OCSD/Communications will coordinate ballot transportation for the Primary Election on June 5, 2012. City and County RACES units and MOU organizations will be supporting this activity with communications between the Collection Centers and the Vote Tally Center (VTC), beginning at 8:00 PM. Communications setup will begin at the VTC at 7:30 PM. See Marten Miller's article in May 2012 *NetControl* for details. A briefing will be provided at the June 4th OCRACES meeting at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange.

Field Day: June 23-24 at Craig Park

OCRACES will participate in Field Day on June 23-24, 2010, at Craig Regional Park in Fullerton. Setup will begin at 8:00 AM. Lieutenant Ralph Sbragia is the Field Day chairman, and Kenan Reilly, KR6J, is leading contest operations.

City/County RACES/MOU Meeting: June 25th

The next City/County RACES & MOU meeting will be on Monday, June 25, 2012, at 7:00 PM, 840 N. Eckhoff Street, Suite 104, in Orange. At this meeting we will review the May 19th City/County RACES & MOU drill.

Countywide ACS Drill Focuses on 7.8 Quake
by RACES Lieutenant Ralph Sbragia, W6CSP, Radio Officer

On Saturday, May 19, 2012, OCRACES and 19 City RACES units and MOU organizations participated in a two-hour drill centered on a 7.8 San Andreas seismic event. Nine OCRACES members and OCSD Emergency Communications Manager Marten Miller, KF6ZLQ, staffed the EOC and conducted the second portion of the drill. OCRACES members included Lieutenant Scott Byington, KC6MMF; Sergeant Chuck Dolan, KG6UJC; John Bedford, KF6PRN; Jim Dorris, KC6RFC; Brian Lettieri, KI6VPF; Marty Oh, KJ6RWE; John Roberts, W6JOR; Brian Turner, KI6WZS, and Lieutenant Ralph Sbragia, W6CSP, who stepped in for Captain Ken Bourne, W6HK, who was under the weather.

The drill began at 0855, when OCRACES members received a text page. After roll call on the 146.895 MHz repeater, participating groups began passing messages in support of the message blitz (drill exercise "A"). OCRACES received and trans-

Jim Dorris, KC6RFC, Lt. Scott Byington, KC6MMF, and Lt. Ralph Sbragia, W6CSP (left to right), at Winlink station.

Brian Turner, KI6WZS, Brian Lettieri, KI6VPF, and John Bedford, KF6PRN (left to right), at drill operating positions.

mitted a message to each participating City RACES unit and MOU organization. Also included as part of the message blitz were messages in each direction via Winlink. At the same time, Marten Miller, Chuck Dolan, and John Roberts began and monitored drill exercise "B": the Simplex Relay.

Participating City RACES units and MOU organizations included American Red Cross, Brea, Buena Park, Costa Mesa, Cypress, Fullerton, Hospital Disaster Support Communications System, Huntington Beach, Irvine, Laguna Beach, Laguna Woods, Los Alamitos, Mission Viejo, Newport Beach, Placentia, Santa Ana, Seal Beach, and Westminster.

Both drill exercises were considered successes with a variety of lessons learned. One important discovery for OCRACES was desensing between communications positions in the RACES Room. An immediate solution was turning down the power levels of the responsible radios. Other solutions will be discussed at the June monthly meeting. City and MOU representatives are invited to attend the June monthly meeting on Monday, June 4th, 2012, and/or the City/County RACES & MOU meeting on June 25, 2012. This will give us an opportunity to document and share lessons learned by each of the participating groups.

Sgt. Chuck Dolan, KG6UJC, operates exercise "B" (Simplex Relay) atop hill outside EOC.
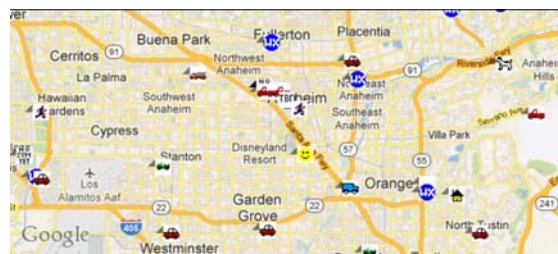
Android Invades Ham Radio
by RACES Lieutenant Ralph Sbragia, W6CSP, Radio Officer

The Blackberry 8350i's Anne and I have been using were getting a bit long in the tooth, so I decided to start looking to upgrade us to new "4G" smartphones. After first researching what operating systems a database app I needed to port from the Blackberry to the new phone would also run on, I chose new Motorola Photons for us. They have one of the larger screens (4 inches) and the price point was within our budget with discounts and rebates from Sprint. This device also introduced me to the Android operating system (OS).

I had only had the phone a little over a week when we met for breakfast on May 12th, where Ken teased me for not already having Echolink installed on the phone. After our setup and check-out of the A3 and a trip to Craig Park, I returned home to do some research. What I found are almost 180 applications (apps) for the Android at play.google.com when you search with the words "Ham Radio." I am not going to review all of them today—what I will be doing is every few months (or less) I'll review my experiences with a few of these apps and how we might use them in RACES and EmComm.
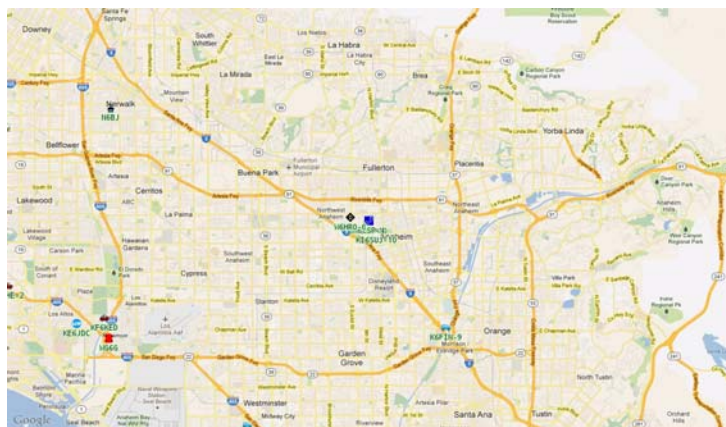
Of course (considering the author) the first place I went was to the APRS apps. However, before I discuss the apps, let's talk about APRS and smartphones. First off, be prepared for the GPS to feed heavily on your batteries if you're not outside with a good lock. Also, even though APRS data packets are rather small, depending upon your settings and other factors including the number of map tiles you download, you could suck up a fair amount of data staying connected to the APRS servers all the time—so be aware of how this can impact your data plan. Now on to the apps:

APRS Viewer is just that, a rather simple APRS viewer that will connect to the APRS servers (not sure which one and you cannot modify the setting) and download a specified number of local stations based on the location currently stored in the phone's OS. You choose from 150, 200, 300, 400, or 500. The server connection is not constant; you need to reload the stations each time you want to refresh. You can tap on displayed stations and get their lat/lon, have the software draw a path from you to the station, or, in the case of weather stations, you can also call up the most recent weather information. You can also search for a specific call sign, but you have to know the SSID (such as W6CSP-7); the app does not do

APRS Viewer screen shot.

wildcards and will not list all W6CSP stations if you leave the SSID off. For a free app, it's not bad if all you're looking for is a way to see what APRS stations are around a specific location.

For just $4.49 you can upgrade from the simple viewer to a well featured APRS application. APRSdroid has most of the functions you would expect from a PC APRS app like APRSISCE. Once you set your call sign and APRS-IS server code (a verification password available for free), the app will connect to the APRS-IS servers (you can input one of your own choosing or leave the default) and begin beaconing your position with a telephone handset as your icon. It will also transmit a filter to the server and only download those stations within a number of miles of your location. You set the distance in the settings. All stations are then displayed on a zoomable map or a text log of the received packets. When you tap on a displayed station, the log for all stations with that call sign is displayed, and buttons redisplay the map, display the station on aprs.fi, or look up the call sign at QRZ.com. You can also send APRS messages via the app. One feature I would not mind seeing in a future version would be the ability to save the log from one or more stations. Overall, I'm pretty happy with the app and it was worth the $4.49.

APRSdroid screen shot.

A closing discussion regarding Android phones and tablets: From my initial investigation, each of the apps I will be reviewing will operate on either a phone or tablet PC. Tablets (or at least the Acer tablets I have investigated to date) have a GPS engine built in, so there is no need for an external GPS as there is with a laptop. I have been surprised and impressed with the sensitivity of the GPS engine in the Photon—indoors (first floor of a one-story wood frame) I can pick up six or more satellite signals and get a position with less than 150 feet of error. This is certainly a vast improvement over the engines we have used in the past.

Next time I'll be choosing from: Ham Radio Tools; HamSatDroid; SatTrack; and HamGPS.

RACES/MOU News from Around the County

"RACES/MOU News" provides an opportunity to share information from all City & County RACES/ACS units and MOU organizations in Orange County.

Please send your news to *NetControl* Editor Ken Bourne, W6HK, at:

w6hk@ ocraces.org

American Red Cross
Serving Orange, Riverside &
San Bernardino Counties

This year's American Red Cross May-Day event is scheduled for Saturday, August 25, 2012.

Deputy Regional Communications Lead Richard Burbridge, KI6RBT, has announced that John Butler, KJ6ITN, is the new Orange County Communications Activity Lead, and Bill Rose, KA6HMS, is the new Orange County Communications Activity Co-Lead.

Hospital Disaster Support
Communications System (HDSCS)

During California's "Golden Guardian" statewide disaster preparedness exercise on May 15, 2012, 21 hospitals in Orange County utilized HDSCS amateur radio operators in their facilities in response to a simulated Richter 7.8 earthquake. The drill scenario began 18 hours after the fake-quake took place with the hospitals confronting the communications infrastructure issues and supply needs that would be occurring at that point on the time line. An aftershock caused Western Medical Center in Santa Ana (WMCSA) to evacuate 50 patients, who were simulated for the purposes of the drill by community volunteers and nursing students. These "patients" were transported by ambulance to 25 Paramedic Receiving Center hospitals elsewhere in the county. After the drill, HDSCS communicators coordinated the return of these volunteers to WMCSA. Six amateur radio repeaters and numerous simplex frequencies were used by HDSCS operators during this drill. Messages included arrangement of emergency transport for an infant, calls to law enforcement for security concerns, and requests for resources from Orange County Emergency Medical Services Agency (OC-EMSA) and the Red Cross. Taking their portable equipment into hospitals for this drill were Louie DeArman, K6SM, Richard Deen, KI6HWY, Bill Hegardt, K6WIL, Rebecca Katzen, KI6OEM, Bruce Lent,

K6HRU, Pete Martinez, K2PTM, Jim McLaughlin, AB6UF, Justin Miller, KI6AFZ, Joe Moell, KØOV, Cindy Orrico, W6WGA, Dale Petes, KI6ANS, Bill Preston, KZ3G, Dave Reinhard, KJ6REP, Ray Rittenhouse, KF6WZN, Chris Sanders, KE6BRY, Gary Sanders, KC6TWZ, Branden Schlarbaum, K2BMS, Ken Simpson, W6KOS, Tom Smith, KB6A, Clay Stearns, KE6TZR, Matt Stofle, W6MWS, Scott Stys, KG6LJY, Mike Turner, W4OPS, Fred Wagner, KQ6Q, Dave West, KI6EPI, and Woody Woodward, W6PA. Operating from the OC-EMSA Command Vehicle at WMCSA in support of the evacuation was Tom Gaccione, WB2LRH. Home base station and net control operators were Kim De-Celles, K9KIM, April Moell, WA6OPS, Dave Popko, AF6TN, Jackie Schaffer, WA6AKP, and Jon Schaffer, W6UFS.

A T1 telephone/data trunk line at Garden Grove Hospital became intermittent and noisy on May 17, 2012. The hospital scheduled a replacement for the line for that evening and asked HDSCS members to come in to provide backup communications for critical units within the facility while phones were down for the replacement. Six HDSCS members were stationed at critical units within the facility including Emergency Department, Telemetry, Intensive Care, Step-down, Mother/Baby, and Medical/Surgical. They were Tom Gaccione, WB2LRH, Rebecca Katzen, KI6OEM, Pete Martinez K2PTM, Gary Sanders, KC6TWZ, Chris Sanders, KE6BRY, and Mike Turner, W4OPS. Outside base-station contacts were April Moell, WA6OPS, Jackie Schaffer, WA6AKP, and Jon Schaffer, W6UFS. Fortunately, the replacement work was uneventful and HDSCS operations lasted about 90 minutes

June 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4 *OCRACES Meeting* & *Weekly ACS Net*	5 *Primary Election*	6	7	8	9 *Southwest ACS Meeting*
10	11 *Weekly ACS Net*	12	13	14 *EOC Responder Section Training*	15	16
17	18 *Weekly ACS Net*	19	20	21	22	23 *Field Day*
24 *Field Day*	25 *Weekly ACS Net* & *City/County & MOU Meeting*	26	27	28	29	30

Upcoming Events:

- **Jun 4**: OCRACES Meeting, 1930 hours, 840 N. Eckhoff Street, Suite 104, Orange

- **Jun 5**: Primary Election Ballot Transportation Support Communications

- **Jun 9**: Southwest ACS Meeting, 0900, Los Angeles County EOC

- **Jun 14**: EOC Responder Section Training, 1000-1200, OC EOC

- **Jun 23-24**: Field Day

- **Jun 25**: City/County RACES & MOU Meeting, 1900 hours, 840 N. Eckhoff Street, Suite 104, Orange

- **Aug 25**: American Red Cross MayDay

www.ocraces.org

Mission Statement

County of Orange RACES has made a commitment to provide all Public Safety departments in Orange County with the most efficient response possible to supplement emergency/disaster and routine Public Safety communications events and activities. We will provide the highest level of service using Amateur and Public Safety radio resources coupled with technology, teamwork, safety, and excellence. We will do so in an efficient, professional, and courteous manner, accepting accountability for all actions. We dedicate ourselves to working in partnership with the Public Safety community to professionally excel in the ability to provide emergency communications resources and services.

County of Orange RACES Frequencies

10 m: 29.640 MHz output, 29.540 MHz input, 107.2 Hz PL (off the air)
6 m: 52.620 MHz output, 52.120 MHz input, 103.5 Hz PL
2 m: 146.895 MHz output, 146.295 MHz input, 136.5 Hz PL*
2 m: 147.480 MHz simplex
1.25 m: 223.760 MHz output, 222.160 MHz input, 110.9 Hz PL
70 cm: 446.000 MHz simplex
70 cm: 449.100 MHz output, 444.100 MHz input, 110.9 Hz PL (private)
70 cm: 449.180 MHz output, 444.180 MHz input, 107.2 Hz PL (private)
23 cm: Off the air until reprogrammed to new coordinated frequencies

*Primary Net—Mondays, 1900 hours

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Chuck Dolan, KG6UJC
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County of Orange RACES

**Visit Our Web Site
http://www.ocraces.org
It's Where It's @!**

Questions or Comments?
Contact *NetControl* Editor Ken Bourne, W6HK
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*"W6ACS ...
Serving
Orange County"*

Meet your County of Orange RACES Members!

Ken Bourne W6HK	Scott Byington KC6MMF
Harvey Packard KM6BV	Ralph Sbragia W6CSP
Marten Miller KF6ZLQ	Robert Stoffel KD6DAQ

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Nancee Graff
N6ZRB

Ray Grimes
N8RG

Walter Kroy
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