



CARES



Cupertino Amateur Radio Emergency Services

CARES Drill CD9903, CD9904, CD9905 Report

10/16/99

Introduction

This report covers the series of drills leading up to and including the Santa Clara County October 13 Simulated Emergency Test. CARES members participated in two dress rehearsals and the final drill over the past few months.

Amateur Radio-only dress rehearsal drills were scheduled by the Silicon Valley Emergency Communications Service (SVECS) to ensure that city-to-county Amateur Radio communications was practiced and verified operational. The SVECS overall objective for the drills was to demonstrate Amateur Radio's message passing capability to city and county government officials. This objective was met. Over the course of the drills, CARES members commented on the state of overall readiness and observed significant improvement from the first drill to the last.

Overview

For CARES, the primary objectives for all drills were to (1) introduce CARES members to the County Communications aspect of the CARES mission, and (2) activate CARES to support the County-wide drill. Secondary objectives were to ensure that the CARES packet capability was understood and operational. All objectives were met.

All drills were performed from fixed locations including the Cupertino EOC radio room. CARES prepared for this drill by (1) holding an "Introduction to Packet" orientation training during the September meeting, (2) acquiring and installing a new EOC Radio Room packet computer, and (3) developing draft packet operations procedures. Because of the intent of the dress rehearsal drills were to "wring out" problems with city-to-county communications, CARES members participation was voluntary.

Event Specifics

Event Name	Date	Activation No.	CARES Participants
SVECS Dress Rehearsal	Saturday, September 18	CD9903	2
SVECS Dress Rehearsal	Sunday, October 10	CD9904	2
SCC County Drill	Wednesday, October 13	CD9905	3

Drill Set-up

Drill preparation was limited to the following:

- A 1.5 hour orientation session on packet was held during the September CARES meeting.
- The CARES EOC radio room packet computer was upgraded and put into service.
- Draft packet operational procedures were developed and tested during the drills (to be incorporated into a subsequent release of the SOP).

Drill Execution

All drills were started on time and included the following activities:

1. Net activation
2. City EOC check-ins
3. Report of simulated city traffic by voice and packet to the county
4. Securing the Drill

Summary of September 18 Drill – CD9903

The following is a composite report from reports prepared by Andy W9BJX and Bill KF6MCG.

- Andy W9BJX and Bill KF6MCG participated in this drill, each operating from their own home locations. Communications between them was maintained by phone.
- The drill scenario was a simulated 7.1 Richter quake on the Cupertino fault. County EOC reported initial guesses that 45000 homes might have been damaged beyond liveability and nearly 900 roads were affected to some degree. County asked that drill traffic follow the RIMS format (a copy wasn't available to cities for that drill). County Net Control enumerated what they wanted in terms of damage, deaths, injuries, etc., etc. They wanted all this by packet if at all possible.
- A roll call of all cities was held. About a third of the cities were available. (By drill end, maybe half the cities reported in.) A couple of cities actually opened up their EOC's. Most seemed to be running like Cupertino: a couple of hams at someone's house.
- Bill tried to log on to packet on 144.91 for the first 15 minutes with no luck. It was discovered that there were a lot of people with the same problem. Bill kept trying and get connected at about 12:20.
- County claimed for the first 90 minutes or so that nothing was wrong with the packet system and that they were up and running just fine. This was in spite of two or three cities continually asking whether packet was going to be up at all. Eventually, County admitted they had troubles at their end and they were finally up. Then the backlog of messages overloaded their capabilities to respond and no one got any response back.
- Cupertino was second to respond with a simulated voice message. Andy W9BJX gave a mock shelter status, a real packet status ("couldn't connect reliably yet"), and a Stevens Creek Dam status. He was apparently chided twice for speaking too fast since they "had to go find pencils and paper and had to write a lot down...." The second time he delivered the message, going at what he thought was slow speed, they still didn't get the "info" at which time County decided to caution all cities on how the delivery should be. At that point, it was clear that everyone decided to drop attempts at simulated message traffic since no one gave a simulated status report following Cupertino's. They all just started asking equipment questions (packet, etc.) or responding to single direct questions.
- County then directed everyone to stop using 146.115 for questions and go to 440.100 for questions. A little while later, County went off the air. They dropped all activity, on their own, to "reorganize" they said. After 10 minutes of silence they had a new, single operator on 146.115 and a second, single operator on 440.100. Prior to that, the same person had been working both frequencies all this time and clearly got swamped and disorganized.
- Conclusions: It is clear that continuous drills are required (last one of this magnitude was a couple of years ago). Also, CARES needs to drill with people operating at the EOC.

Summary of October 10 Drill – CD9904

- Jim KN6PE and Ken KR6CO participated in this drill from the Cupertino City Hall EOC radio room.
- The drill scenario was a 7.1 Richter earthquake on the Monta Vista fault. Similar damage estimates were given as those in the previous drill.
- The RIMS form for Situation Reporting was previously received by US Mail and used for this drill. Cupertino successfully connected by packet and delivered a RIMS Situation Report. A packet acknowledgement was

received. Additional checking of the County EBBS seemed to indicate that the County packet EBBS was stable and operational throughout the drill.

- Voice traffic with requests and reports were passed on 146.115 (Command Net). Questions on various subjects were answered on 440.100 (Tactical Net). County Net Control performed health and welfare checks of all city operators every half-hour.
- It appeared that everyone learned a lot from the previous drill. Messages were passed slowly with breaks in between sentences so the receiver could write it down. Two cities caused a repeater time-out. While this method of passing voice traffic was slow, messages were delivered and acknowledged. It appeared there was an operator on the County end the whole time who knew how to handle Net Control.
- Cupertino passed one voice message to County at 1430 requesting they inform the Mtn View EOC (should have been the Sunnyvale EOC) that the Stevens Creek Dam was about to break. We sent a packet message to County at 1440 that the dam burst. At 1510, County EOC passed our original voice traffic to Mtn View.
- The drill secured at 1600.
- Conclusions: Compared to Andy and Bill's experience, this drill was significant improvement.

Summary of October 13 Drill – CD9905

- Jim KN6PE, Ken KR6CO, and Jen KC6VHV participated in this drill from the city hall EOC radio room. Marie KE6RAZ was operating RIMS. The Cupertino EOC was not activated for this drill.
- The drill scenario was a 7.1 Richter earthquake in the Bay Area.
- County later upgraded the magnitude of the drill from a 7.1 to 7.4 and located its epicenter on the Monta Vista Fault. They announced that 48 to 72 hour activation was planned. Several cities apparently did activate their EOC and some declared their city was in a [formal] state of emergency.
- Cupertino passed some minor voice traffic by Amateur Radio. This circuit was relatively quiet in contrast to the activity of the previous drill with more voice traffic occurring on the EOC-to-EOC radio. County Net Control performed health and welfare checks of all city operators every half hour.
- For whatever reason, the Cupertino City RIMS system could not maintain a good connection with the County server. Later during the drill, County announced that the County RIMS server was just rebooted (because of a hang?).
- Marie directed CARES to pass the RIMS Major Incident Report, then the RIMS Situation Report. Both reports were passed to the County EOC by packet radio successfully. Additional checking of the County EBBS indicated the County EBBS was stable and operational throughout the drill.
- Conclusions: Practice makes perfect. From what we could hear, this drill also seemed to go well. However, it was also clear that all operations centers – be it Cupertino EOC or County EOC – will be very hectic and operating at a high level of stress.

Results of Drills

No on-air critique was held by County following the drill. However, a critique was held during the October 12 SVECS Net to review the performance of the October 10th drill. CARES members wrote summary reports or held a review of the drill following each event. The following is a combined summary of thoughts, observations, and feedback from the drill's participants. Duplicate comments are listed only once and are indicated as such. A combined of recommendations is listed following all comments.

1. COMMENT: Cupertino needs to do some drilling with its people and its EOC.
 - RESPONSE: AGREED. The last two drills were held at the EOC and subsequently identified several areas where CARES needs to spend preparation time including general logistics, equipment placement, resource planning, and additional required support material (see list later) to name a few.

2. COMMENT: The bulk of the EOC Radio Room equipment is required to support the county communications: Command Net on 2 meters, Tactical Net on 440, city-to-county Packet on 220, and the EOC-to-EOC radio. CARES need to define the right operating environment to support a real event.
 - RESPONSE: AGREED. The last two drills were held at the EOC and subsequently identified several areas where improvements need to be made, including room layout, additional support equipment, training, management processes, and staffing. Additionally, given the overhead to support the county and still maintain our effectiveness with the city, radio room operator positions may be as many as 3. This needs to be defined.

3. COMMENT: CARES ended up operating the EOC-to-EOC radio. To be truly valued by the city, our role may need to evolve to be more general communications specialists to support Cupertino and may extend to staffing the EOC-to-EOC radio, participate in RIMS operations, etc.
 - RESPONSE: This needs to be resolved and agreed to by the City and reflected in the MOU.

4. COMMENT: Need to have clear expectations as to what County is expecting. County asked for drill traffic to be passed in the RIMS format.
 - RESPONSE: This format was mailed out to ECs after the September 18th drill and prior to the October 10th drill. Additionally, while the County only wanted cities to pass RIMS Situation Reports by packet, Cupertino experienced a RIMS “outage” and ended up passing the RIMS Major Incident Report by packet as well.

5. COMMENT: It would be a good idea to be at the same location for the next [drill].
 - RESPONSE: AGREED. Communications directed toward the county will require access to the Cupertino EOC staff. The two follow-on drills were held in the EOC radio room and support this observations. In the event that the EOC is unavailable for any reason, CARES should establish an intact station close to the EOC Staff in a manner similar to what we did for Field Day.

6. COMMENT: With 4 radios on at once (County command net, tactical net, EOC-to-EOC, and CARE Emergency Net), the radio room potentially will be a very noisy and distracting place.
 - RESPONSE: This was evident during the last two drills with only the County radios on.

Recommendations

1. Need to develop a single page radio cheat sheet (already done?), laminated, for radio room.
2. Benchmark our processes with other city’s ARES groups.
3. Need support equipment for the radio room: 3rd set of earphones, alcohol pads/wipes for headphones, pencils, pens, paper, clock (preferably digital) at desk level, printer paper and ink cartridges, post-its, pad of message forms, pain relievers (aspirin, Tylenol, Advil), etc.
4. Request the City mount the white board in the radio room. Re-arrange the bulletin board.
5. Radio equipment placement needs to be thought out given the need for multiple operators in that space.
6. Need to re-arrange computer and TNC so that operator can monitor TNC.
7. There will be plenty of paper-based message handling. Need to develop some organizational structure for it.
8. Ensure the kitchen area is stocked with sponges, paper towels, etc.
9. Change the SOP to include all required RIMS forms. List them as forms, not just tables.
10. Include all anticipated reports and formats in the SOP. Train the membership on these reports.
11. 440 radio produces a double beep whenever the squelch is broken. Need to figure out how to use this and turn it off.
12. Need to load printer drivers for packet computer.
13. TNC internal battery appears to be dead. Need to replace.

14. Need to mount more recent map, cover with a plastic overlay for marking.
15. Schedule training of CARES in EOC radio Room operations.
16. Investigate additional sound dampening for the room.
17. Develop operator position descriptions for all defined EOC radio room operator positions.

END OF REPORT