

# After Action Report 2014 Packet Deployment Exercise



Cupertino  
ARES/RACES

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## 1. Overview

**Description:** 2014 Packet Deployment Exercise  
**Event Date:** 24 January 2015  
**Report Date:** 15 November 2014  
**CARES Event:** CUP-14-25T  
**RACES Event:** CUP-14-25T  
**Control:** Cupertino ARES/RACES  
**Report Revision:** 1.0, **FINAL**  
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### Requirements for Reporting

Completing an After Action Report is part of the required SEMS reporting process. The Emergency Services Act, Section 8607 (f) mandates that the Office of Emergency Services (OES) in cooperation with involved state and local agencies complete an After Action Report within 120 days after each declared disaster. Section 2450 (a) of the SEMS Regulations states that, "Any city, city and county, or county declaring a local emergency for which the governor proclaims a state of emergency, and any state agency responding to that emergency shall complete and transmit an after action report to OES within ninety (90) days of the close of the incident period as specified in the California Code of Regulations, section 2900(j)."

CARES will follow this requirement for reporting the results and recommendations for this Training Event.

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### i. Introduction and Background

#### Terms

**ARK:** City-owned shipping containers strategically located throughout the city that are stocked with emergency supplies to support a field-based ICS field response; where the public can report disaster related emergencies when they cannot get through to 9-1-1, or 9-1-1 is unable to send resources. Staffed by CERT.

**CARES:** Cupertino Amateur Radio Emergency Service, ARES/RACES organization supporting the City of Cupertino.

**CCC:** Cupertino Citizen Corp, the collection of volunteer response organizations made up of CARES, CERT, and MRC

**CERT:** Community Emergency Response Teams

**DOC:** Departmental Operations Center. In our context, CCC reports to the CCC DOC who in turn reports to the EOC.

**MRC:** Medical Reserves Corp

**NCO:** Net Control Operator, may be indicated by M-NCO (Message Net) or R-NCO (Resource Net)

**Packet:** Refers to Amateur Radio AX.25 Packet Radio, a mode for digital messaging.

PSA: Preliminary Safety Assessment, a home-based assessment that develops a quick snapshot of the state of the city based on the distribution of CARES members.  
RRO: Radio Room Operator

### **Introduction**

For the past few years, there has been new interest in digital messaging with Amateur Radio AX.25 Packet as the leading contender. With funding assistance from the City of Cupertino, CARES has built up seven (7) packet kits that will present a consistent use model for Amateur Radio packet activities in the field.

This year's CARES Fall Exercise focused on Packet Operations, specifically message handling between the field and the EOC. The intent was to further build familiarity with this mode, as well as to identify additional limitations and opportunities for its use. The key driver for building digital messaging expertise is that this mode allows for a 30 times more data to be moved when compared to voice message traffic. Additionally, Santa Clara County RACES has made a significant investment in building out a county-wide digital messaging environment using packet radio.

On 15 November 2014, the City of Cupertino authorized a training activation under the designation CUP-14-25T to conduct the Packet Deployment exercise. This report is a summary of this exercise.

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### **ii. Type / Location of Event / Drill / Exercise**

Event Type: City of Cupertino, CARES Training Activation  
Event Identifier: CUP-14-25T  
Event Name: 2014 Packet Deployment Exercise  
Location: City of Cupertino

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### **iii. Description of Event / Drill / Exercise**

The Goals of the drill were:

1. Exercise the CARES AX.25 Packet Radio messaging solution as part of full field deployment.

The following CARES objectives were developed for this exercise.

1. Exercise emergency voice and packet communications message handling procedures.
2. Exercise packet radio kit deployment, setup, and operation at the ARKs.
3. Create, send, and receive packet messages.
4. Exercise resource net concepts and procedures.

Event resources came from the following organizations:

1. Cupertino ARES/RACES: Responsible for checking into the CARES emergency net, performing the field deployment process, responding to, setting up, and operating packet from the ARKs. Fifteen (15) CARES members participated in the test.
2. Cupertino CERT: Responsible for opening the ARKs and performing the role of SIM CELL for originating packet messages. Five (5) CERT members participated in the test.

The drill was initiated as a pre-announced event with CARES members knowing to check into the CARES Emergency Net at the appointed time.

1. Established the Emergency Net for initial drill check-ins.
2. CARES members were directed to perform their PSA Survey.
3. The ARKs were opened, and 6 packet communications stations were set up, 3 at each ARK.
4. Packet traffic was passed.
5. At the end of the drill, a debrief was held at the EOC.

**Performance against Objectives:**

1. Exercise emergency voice and packet communications message handling procedures

Results: **SATISFACTORY**. All participating members operated on the resource and message net per the defined process.

2. Exercise packet radio kit deployment, setup, and operation at the ARKs.

Results: **SATISFACTORY**. Six packet kits were deployed, 3 each to 2 ARKS (simulated all ARKs were opened). Tents, tables, chairs, generators, and radio gear was set up. All stations were operational within the expected time.

4. Create, send, and receive packet messages.

Results: **SATISFACTORY**. All six packet stations were successful at creating, sending, and receiving package messages. Messages were originated by the CERT teams.

4. Exercise resource net concepts and procedures.

Results: **SATISFACTORY**. Members checked into and out of the resource net while in transit (i) to their assignment, and (ii) the EOC for the debrief. Standard net control procedures were followed. All members were always accounted for.

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**iv. Chronological Summary of Event / Drill / Exercise**

All events took place on Saturday, 15 November 2015. All times listed are approximate and in local time.

<b>Time</b>	<b>Description, Note, Comment</b>
0800	CARES Emergency Net was activated.
0805	15 CARES Members checked in, identified who was available for a field assignments.
0820	All CARES member assignments were made.
0835	CARES members at ARK sites. Begin setup
0900	Approximate start time for the first packet message traffic
1045	Direct the ARKs to secure and shut down. Return to the EOC.
1120	Secure the Drill, start the debrief.
1215	Secured the debrief

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**v. Response at SEMS Levels (as appropriate):**

Include a summary, conclusions, the field response, and other local, operational area, regional, state or federal response.

Per the process, all participating CARES members followed defined resource net, ARK setup, and Packet procedures.

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**vi. Interacting Systems, Agencies, and Programs:**

Include mutual aid systems (law enforcement, fire/rescue, medical, etc.); cooperating entities (utilities, American Red Cross, Sheriff's Office, City Departments, etc.); telecommunications and media interactions.

**Cross-team interactions**

CERT and CARES worked well together.

1. Having multiple packet stations at one ARK gave the CERT teams a sense of the Communications operation, the requirements for digital message handling, and the opportunities that this mode offers to CCC response.
2. Working directly for the CERT staff gave CARES members a sense of the interactions they can expect from the ARK ICS setup.

**Communications Systems**

All Packet Kits worked as expected.

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**vii. Improvements, Conclusions, Recommendations:**

As applicable, include a description of actions taken, assignments, associated costs or budget, timetable for completion or correction, and follow-up responsibility.

The following is a summary of the key Improvements, Conclusions, and Recommendations.

**What worked?**

- Field packet setup went smooth.
- Mag Mount on a cookie sheet (ground-plane) on top of the pop-up worked well.
- Understand the need to pass urgent messages by voice.
- CERT and CARES worked well together.
- CARES members participated in setting up the ICP... now understand what is involved.

**What didn't work / needs improvement?**

- Getting the access codes to the ARKs.
- PacFORMS Process did not work as planned; Javascript was turned off on some PCs; could not find how to turn it on.
- Hard to read the PC screen in the sun.
- Could have used DOC simulation.
- Message and Resource Net (2) on the same frequency... NEVER AGAIN.

**Recommendation**Packet Process

Some improvements were identified that need to be implemented. These include:

1. Add simple message examples to the Packet Guide
2. Work with City on acquiring printers (still missing).
3. Develop a solution for dealing with glare in the field when operating Packet.

Field Startup

One area that was unexpected was the request for ARK (key box) access codes. In reality, this may be expected since CARES members may be the first ones on scene.

1. Work with CCC on the process for retaining ARK access codes in the COMM Van.
2. Practice the ARK open process.

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**viii. Logs, attachments:**

As applicable, include a description of actions taken, assignments, associated costs or budget, timetable for completion or correction, and follow-up responsibility.

No attachments are included

End of Report.