Communicating beyond CARES

March 7, 2024
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CARES mission

The mission of Cupertino ARES is to maintain and train Amateur Radio volunteers capable of providing professional emergency communications, increasing the City's emergency response effectiveness, and speeding the recovery effort.

Communications beyond CARES

Cupertino ARES/RACES

CARES mission?

Have you ever thought what our mission statement means?

The mission of Cupertino ARES is to maintain and train Amateur Radio volunteers capable of providing professional emergency communications, increasing the City's emergency response effectiveness, and speeding the recovery effort.

Consider these 2 phrases:

"…providing professional emergency communications…"

1. We use contemporary voice and digital radio tools
2. We use standard operating procedures
3. We evolve, practice, and deploy with repeatable processes

"…increasing the City's emergency response effectiveness…"

1. We support city volunteers deployed to the field
2. We partner with city service providers
3. ***We communicate with outside groups***

Who are these "outside groups"?

Other than CARES field responders, there are several:

- In Cupertino, there are:
    1. OEM Staff
    2. Cup DOC
    3. Cup EOC
    4. Public Works
    5. CERT

- ISA Partners are:
    6. San Jose Water
    7. Cupertino sanitary district
    8. Valley Water

- Public Safety Partners
    9. SCCo EOC
    10. County Fire, Sheriff
    11. County Comm

- Other Partners, jurisdictions
    12. Cupertino Union School District
   13. Other Cities

Communications capabilities?

	Part 97	Part 95	Part 90	Part 25	PSTN	Other
Cup CARES	VHF/UHF	??			Yes	
Cup CERT		FRS/GMRS			Yes	
Cup DOC					Yes	WiFi, Runner
Cup EOC / CARES	VHF/UHF	GMRS		sat	Yes	
Cup OEM Staff			VHF	sat	Yes	
Cupertino Sanitary District					Yes (cell)	
Cupertino Union School District			UHF trunk		Yes	
County Comm			VHF/UHF		Yes	
County Fire / Sheriff			VHF/UHF		Yes	
Other Cities	VHF/UHF	??	??	??	Yes	
Public Works			UHF trunk		Yes	
San Jose Water			UHF trunk		Yes	
SCCo EOC	VHF/UHF		VHF		Yes	
Valley Water	VHF/UHF				Yes	

How do we do it?
Communicating among ourselves
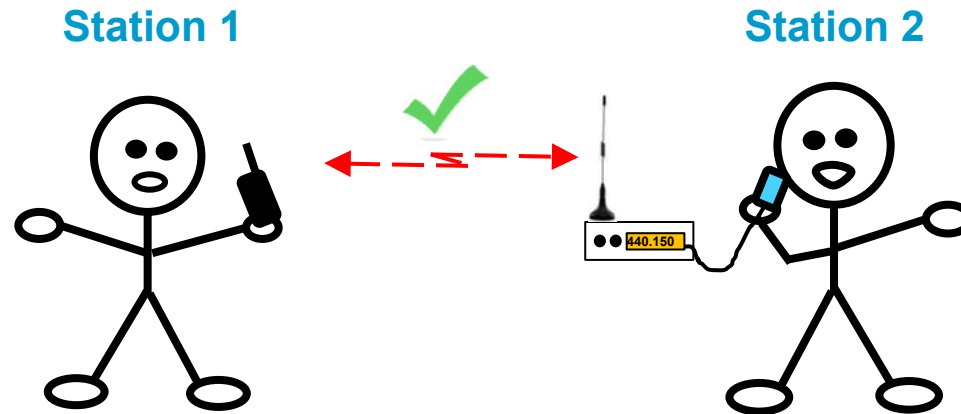
Station 1   **Station 2**

Stating the obvious

✓ It takes at least two to hold a conversation

✓ Similar equipment

✓ Common channels and protocols

✓ Common terminology

✓ Common operating procedures & expectations

What we do have
We train the way we will respond

How does this work?

1. We have '*assets*' – frequencies, repeaters, personal radios, city equipment – that we use during our deployments.

2. We have documented procedures that ensure repeatability with how we operate.

3. We build proficiency through City and County weekly nets, regular training, and periodic exercises.

4. We are a practiced organization for passing messages through activations and public service events.
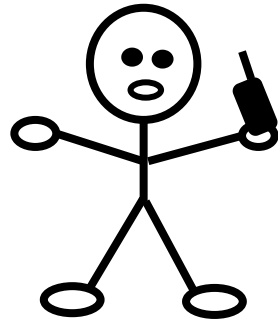
And most importantly,
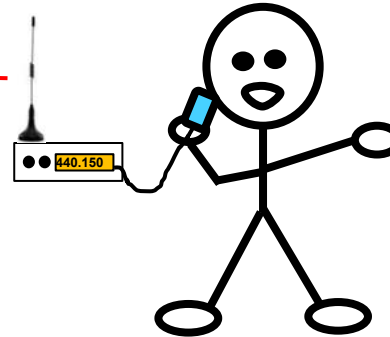5. *We have the support from Cupertino OEM for our efforts.*

What we don't have
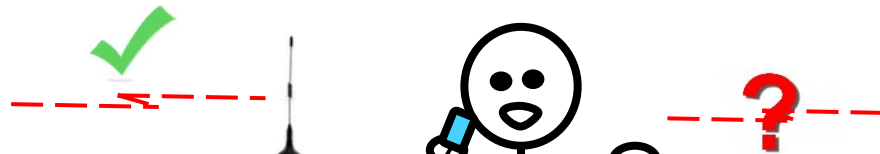## Well defined communications beyond ourselves

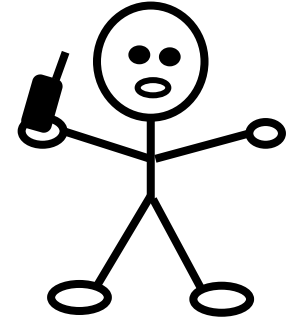**Field Responder**   **Net Control Operator**   **Some partners**

440.150

No common method for handing off messages to some (not all) of our partners.

❌ No agreement on equipment

❌ No agreement on channels or protocols

❌ Some agreement on terminology

❌ No agreement on operating expectations

What messages do we pass?

1. Check-in, Check-out

2. Mike-Mike reports

3. ISA Asset Reports

4. ALT911 / Incident Reports

5. 3rd Party messages

6. Field Observations

7. Tactical traffic

8. Inquiries on operations

Delaying the inevitable

In general…

1. We know there are information handoffs that we need to make, and

2. we recognize the importance of this.

3. Our served agencies may not because:
   - they are focused on their day-job (and current problems), or
   - they have other priorities, or
   - they have other solutions, or
   - they don't think this is a problem.

4. An approach we can take:
   Figure out how to do business in their terms.

CARES Tools Box

Ever hear the quote:

   "*If all you have is a hammer, everything looks like a nail.*"

In CARES, do we think:

   "*If all you have is an HT, everything looks like an amateur radio activity.*"

"If the only tool you have is a hammer, you tend to see every problem as a nail."
This is a famous quote by Abraham Maslow and his 'law of instrument' or Maslow's Hammer. It refers to an over-reliance on a familiar or favorite tool. While such tools can be very useful at times, over-reliance can result in approaching problems in ways that are not always helpful or even destructive.

CARES Communications Toolbox

- Fortunately, we have more than one tool.
- Think of all the communications methods we have at our disposal:

Personally…

1. Amateur radio, voice and packet
2. Amateur radio HT's
3. FRS
4. GMRS mobile radios, HT's
5. Cell Phone
6. Landline telephone

At the EOC/Comm 469…

1. Amateur radio, voice and packet
2. City trunk radio and HT's
3. County EOC-to-EOC radio
4. SCCo Fire Public Safety
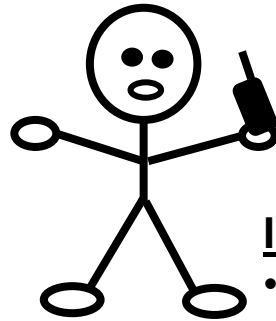5. CUSD trunk radio HT
6. GMRS mobile radio
7. Sat Phone

With all these capabilities, what's the problem?

Mike-Mike reports
How do we do it?

Field Responder

CARES NCO

County EOC

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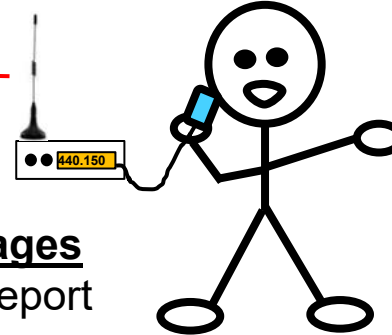
Informal Messages
- Mike-Mike Report
- QuickCapture

?

Cupertino OEM

What Works
1. Our data collection and summary works well
2. QuickCapture will get the reports there … eventually if not sooner
3. In general. the handoff to SCCo RACES is well defined

Known Issues
1. MM summary handoff to Cupertino OEM staff is not fully defined,
2. MM summary handoff to SCCo RACES by SS could be time-intensive
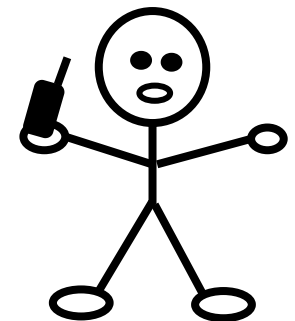
Mike-Mike reports – County EOC

How do we do it?

Field Responder   **CARES NCO**   **County EOC**

Informal Messages
- Mike-Mike Report

SCCo Resource Net

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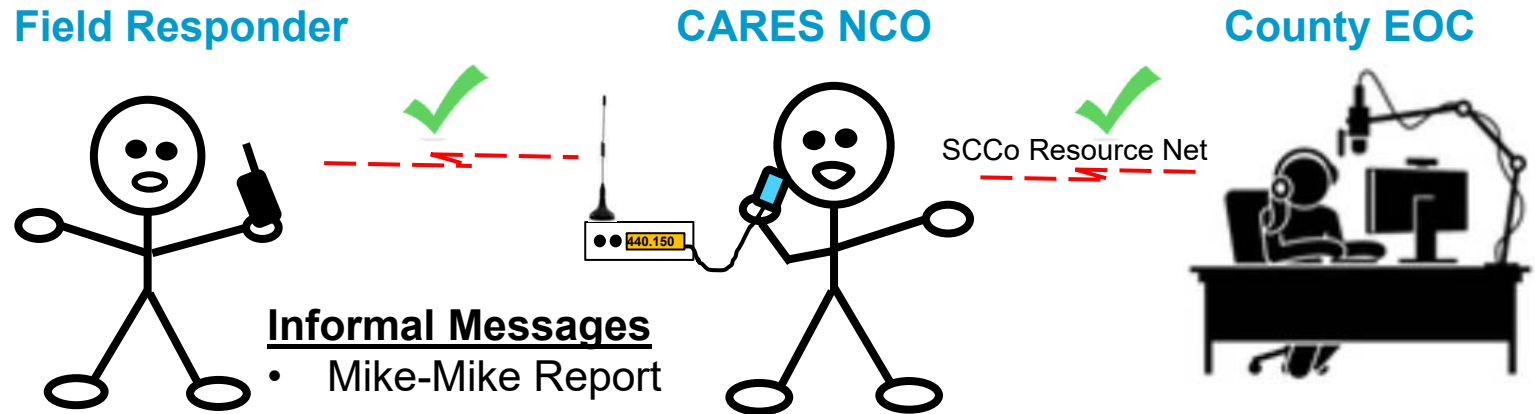
Notification Options

1. SCCo Resource Net SCCo RACES Resource Net, Shift Supervisor owns the task.
2. SCCo Resource Net SCCo RACES Resource Net, CARES member owns the task

Plan

1. Request a volunteer to also copy, confirm, and send the MM summary to SCCo RACES.

Mike-Mike reports – County EOC
How do we do it?

| SCCo ARES/RACES Mike-Mike Summary | 1. Incident Name (if any): *March Earthquake* | | | | | | | 2. Incident Date / Time: *3/7/2024 20:05* | | | | | |

3. City	4. Mike-Mike Tally (use tick/tally marks)								5. Reporting Totals (numerical)					
	MM-1	MM-2	MM-3	MM-4	MM-5	MM-6	MM-7	MM-8	MM1-3	MM4	MM5	MM6	MM7	MM8
1 Monta Vista					//	////						*2*	*5*	
2 Regnart					///							*3*		
3 Garden Gate					//	/							*2*	*1*
4 Lawson					///							*3*		
5 DeAnza														
6 Creekside														
City totals									*0*	*0*	*5*	*10*	*1*	*0*

Instructions for transmitting the summary data on this form to another operator:

Position	Script
Sender ✓	I have Mike-Mike Summary data to transmit. Say when ready to copy.
Receiver	Go Ahead
Sender	Incident Name _____ Date _____ Time _____
Receiver	Go Ahead
Sender	Campbell figures <MM1-3 total> figures <MM4 total> figures <MM5 total> figures <MM6 total> figures <MM7 total> figures <MM8 total>
Receiver	Go Ahead
Sender ✓	*Cupertino figure 0 figure 0 figure 5 figures 10 figure 1 figure 0. End of message. <call sign>*
Receiver	
... and so on ...	
Sender	End of summary
Receiver	Mike-Mike Summary Acknowledged

Mike-Mike reports – County EOC
## How do we do it?

What this means:

1. We have CARES members interested in collecting and sending this data to SCCo RACES, and they…

   - add the CARES Mike-Mike Report to their local go-kit.

   - practice copying the general MM reports when opening a net during an earthquake exercise.

   - practice passing the MM summary report to SCCo RACES.

Mike-Mike reports – Cupertino OEM
How do we do it?

Field Responder   **CARES NCO**   **Cupertino OEM**

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Informal Messages
- Mike-Mike Report
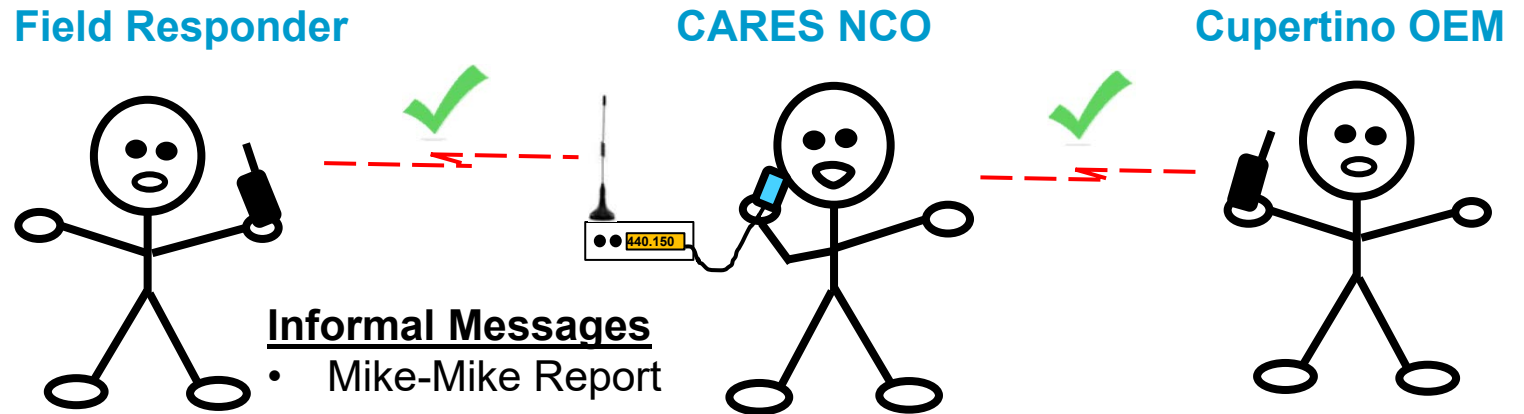
Notification Preference

✔	1. Cell Phone, Text	Works!... but only if cell service is available. Always try first.
✔	2. CARES TAC 3	Cupertino Emergency Manager and CCC Coordinator are both hams.
❓	3. City Trunk Radio	No CARES home access; A few OEM Staff have one.
❓	4. WPYD282 Public Safety	OEM has one VHF NFM public safety channel, no plan for its use. Some Baufeng radios may be P90 certified, but no approval for use.

Plan

1. Determine any broader use of a Public Safety Channel for OEM and CCC.
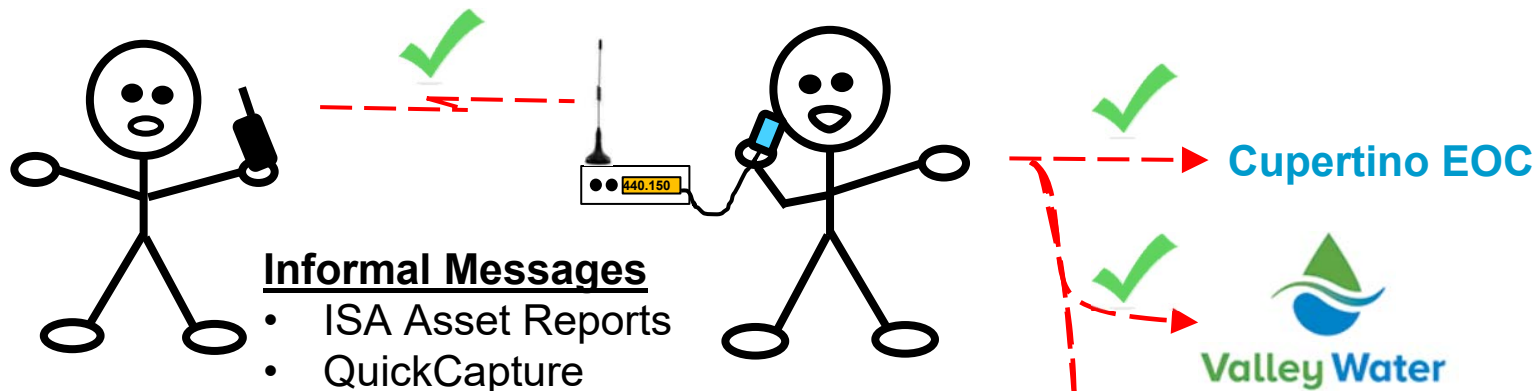2. Practice the MM Summary handoff with OEM Staff

Cupertino ARES/RACES

ISA Reports
How do we do it?

Field Responder

CARES NCO

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Informal Messages
- ISA Asset Reports
- QuickCapture

Cupertino EOC

Valley Water

?

?

What works!

1. ISA Asset status handoff to Cupertino EOC is defined.
2. QuickCapture will get the reports there … eventually if not sooner
3. Valley Water has an amateur radio station; send WATER ISA reports by packet to vwdeoc@w1xsc or vwdeoc@w2xsc, voice to SCCEOC.

Known Issues

1. Cupertino Sanitary District is local; will get a cell phone or text message.
2. San Jose Water no longer has an Amateur Radio operator and currently will get a cell phone or text message.

Cupertino ARES/RACES

ISA Reports – CuSD

How **could** we do it?

Field Responder　　　　　　　　**CARES NCO**

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Informal Messages
- ISA Asset Reports

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Notification Options

✔ 1. Cell Phone, Text　　　　　　Works!... but only if cell service is available. Always try first.

❓ 2. CARES relay　　　　　　　Assign a CARES member to the CuSD Office to receive ISA traffic from NCO and handoff ISA asset messages.

❓ 3. CERT relay by GMRS　　　Assign a CERT member to the CuSD Office to receive ISA traffic from NCO and handoff ISA asset messages. Could address initial CARES staffing constraints during an earthquake.   Need a GMRS operator in C469.

Plan

1. Determine feasibility of using a CERT team for a temporary assignment.

ISA Reports – SJWC
How **could** we do it?

Field Responder

CARES NCO

440.150

Informal Messages
- ISA Asset Reports

SAN JOSE WATER

Notification Options

✔ 1. Cell Phone, Text: Works!... but only if cell service is available. Always try first.

✔ 2. SCCo EOC relay: Send ISA traffic to County EOC for them to relay to SJWC.
                            No guarantee they have a channel to SJWC

❓ 3. SJWC radio: SJWC to can issue a SJWC P90 radio to CARES for ISA traffic,
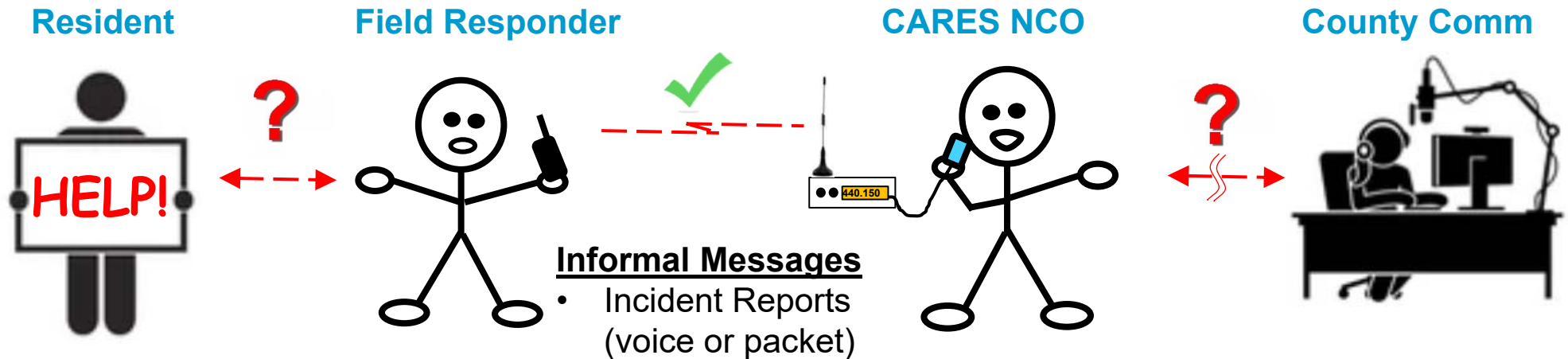   they are looking into this.

Plan

1. Follow up with SJWC on them issuing a SJWC P90 radio.

Incident Reports / ALT911

How do we do it?

Resident **Field Responder** **CARES NCO** **County Comm**

Informal Messages
- Incident Reports (voice or packet)

What works!

1. Field Responder to NCO message passing

Known Issues

1. Have not field-tested Community Access Points
2. Have not field-tested new Alt911 Incident Reporting by packet
3. Have not field-tested new Alt911 Incident Reporting as a voice message
4. Have not field-tested Alt911 Incident Reporting form handoff to EOC for relay to County Comm
5. No direct access to County Comm

Community Access Points

What are they?

Community Access points are…

1. set up at known sites such as city parks, school parking lots, or other public places,

2. with easy access off major city roads,

3. where CARES and CERT receive requests for help, and

4. relay the requests by amateur radio to public safety agencies.

5. This is similar to passing messages from the ARKs to the EOC.

6. More details during our fall exercise.

Community Access Points
Where could they be?

Parks

1. Jollyman Park   Stelling Road
2. Franco Park   Homestead Road
3. Blackberry Farm Golf Course   Stevens Creek Blvd

ARKs

1. Monta Vista ARK   Stevens Creek Blvd
2. Creekside ARK   Miller Ave
3. The Forum   Cristo Rey
4. All other ARKs?

Public Places

1. Rancho Rinconada Commons   Bollinger Road
2. Quinlan Center   Stelling Road
3. Seven Springs Fire Station   Stelling Road
4. Senior Center   Stevens Creek Blvd
5. Cupertino Fire Station   Stevens Creek Blvd

-- IDEAS only --
Not Final or Prioritized

Depends on available Staffing.

Watch for the 2024 Fall Exercise to give this a try

Incident Reports / ALT911
How **could** we do it?

Resident **Field Responder** **Packet or CARES NCO** **County Comm**

Informal Messages
- Incident Reports
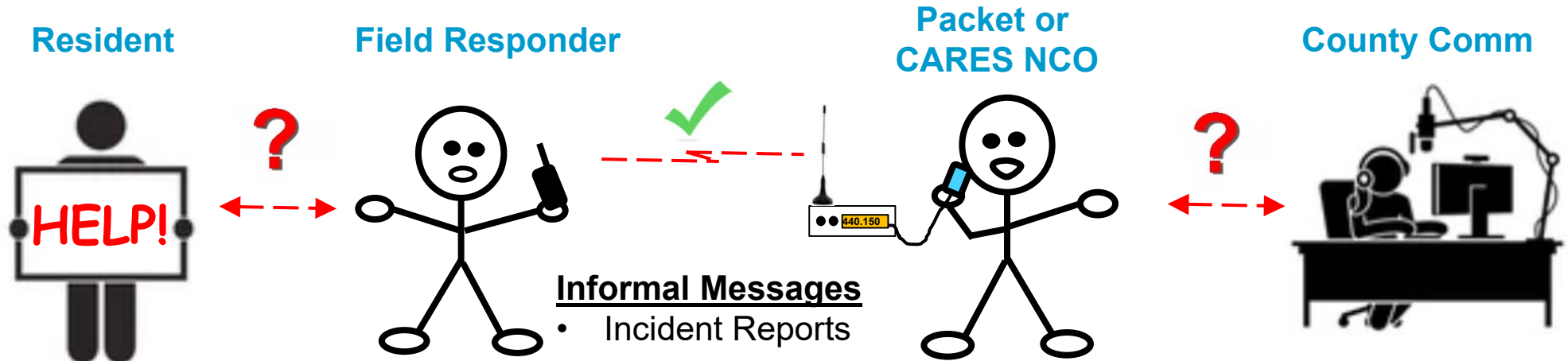
Notification Options

✓ 1. Cell Phone: By field responder... but only if cell service is available. Always try 1st.

❓ 2. Cell Phone: By C469 staff... but only if cell service is available. Always try 1st.

❓ 3. Satellite Phone: By field responder... but only if satellite service is available. Try 2nd.

❓ 4. Satellite Phone: By C469 staff... but only if satellite service is available. Always try 2nd.

❓ 5. CUP EOC handoff: ALT911 packet message received at the EOC. EOC hands off to Public Safety Rep to transmit on County Comm dispatch channels.

Plan

1. Refine the entire end-to-end procedure… test during our 2024 Fall Exercise.
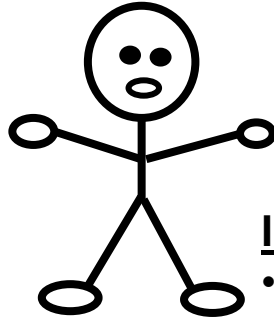
EOC & 3rd Party Messages
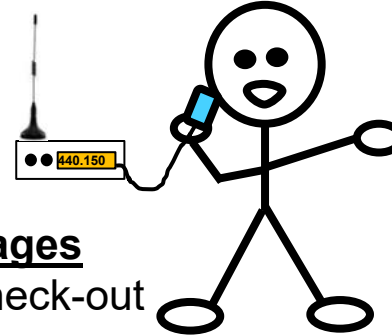## How do we do it?

Cupertino EOC   **DOC/Runner**   **CARES NCO**   **County EOC**

Informal Messages
- Check-in, Check-out
- Tactical traffic
- Inquiries on operations

3rd Party Messages
- ICS 213 Messages
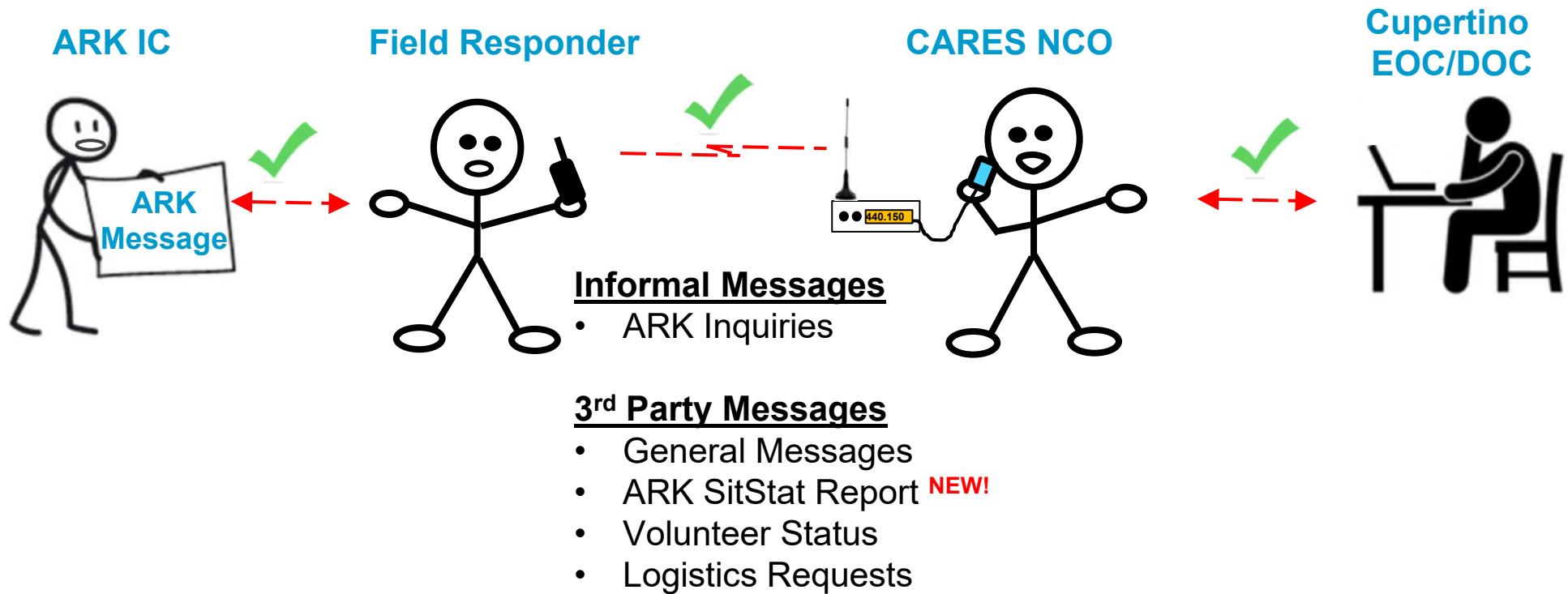- ICS 213RR Request
- OA Jurisdiction Status

What works!

1. Most of the message path from the DOC to County EOC
2. Requires SCCo RACES 3rd Party Message Passing expertise

At the ARK
How do we do it?

ARK IC **Field Responder** **CARES NCO** **Cupertino EOC/DOC**

ARK Message

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Informal Messages
- ARK Inquiries

3rd Party Messages
- General Messages
- ARK SitStat Report **NEW!**
- Volunteer Status
- Logistics Requests

What Works

1. Informal message passing from the ARKs

Known Issues

1. Need practice passing ARK 3rd Party messages

At the ARK and Neighborhood

How do we do it?

What Works

✓ 1. Informal message passing between the EOC and the ARKs

Known Issues

❓ 1. Not enough neighborhood CERT / Block Leader / Neighborhood Watch FRS/GMRS users to cover the entire city, and never tried real end to end message passing.

❓ 2. Not enough GMRS Net Control Stations to cover all the ARKs

❓ 3. Never practiced a full Neighborhood-to-EOC information roll-up and roll-down

Message Passing with Others?

CARES

Public Works

✔

?

CUPERTINO UNION SCHOOL DISTRICT
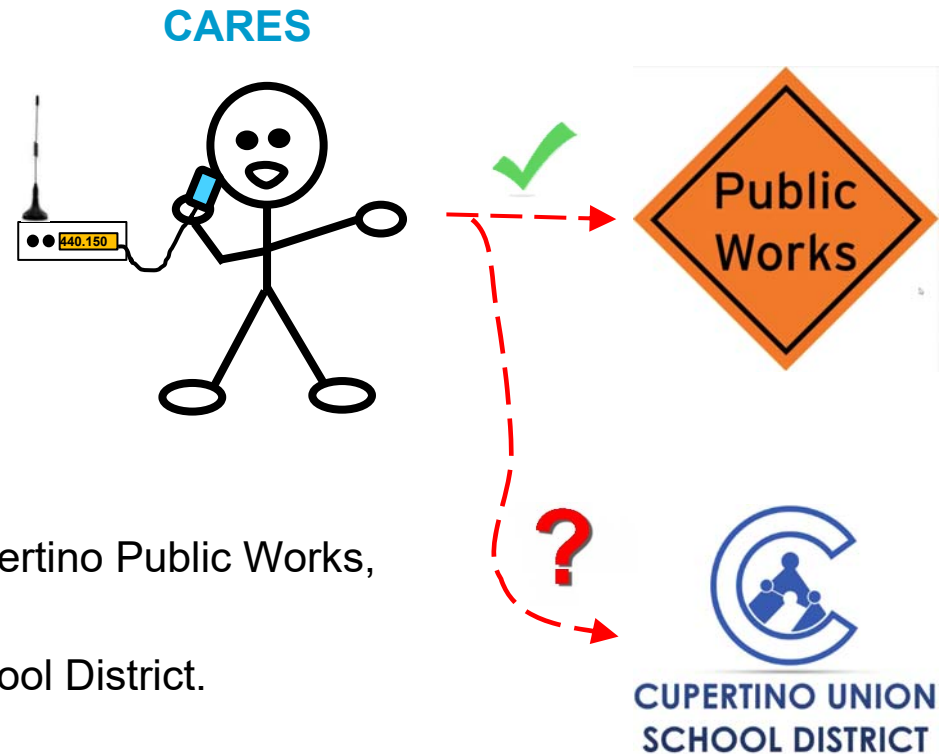
What Works

1. We have a City trunk radio with access to Cupertino Public Works, but we are not usually expected to use it.

2. We have radio access to Cupertino Union School District.

Known Issues

1. Need to clarify the use for each:

    i.   Monitor the channel?

    ii. Relay requests with the EOC?

So, what do we need?

1. CARES responders to help pass messages from the field to the EOC.
    1. ISA assignments
    2. General Field observations of damage or incidents of concern
    3. ARK and Community Access Point / Incident Report message handling
2. Mike-Mike Summary Report passing to SCCo RACES.
3. Have a cell phone and a dial-tone at home after an earthquake?
    Receive by radio and pass by phone any 9-1-1 calls that we get.
4. Have a sat phone or be a sat phone operator at Comm 469?
    Receive incident reports and pass 9-1-1 calls to County Comm.
5. Have a GMRS license and/or interested in an ARK/GMRS NCO assignment?
    Take neighborhood check-ins and requests for help.
6. "Other Radio" operator at Comm 469:
    1. Cupertino Trunk Radio to Public Works
    2. Cupertino Union School District
    3. GMRS to the ARKs
    4. Sat Phone

CARES Communications Toolbox

Want communications methods do you have that you would like to use?

Personally…

1. Amateur radio, voice and packet
2. Amateur radio HT's
3. FRS
4. GMRS mobile radios, HT's
5. Cell Phone
6. Landline telephone
7. Sat Phone
8. HF radio
9. Amateur mesh radio
10. Others?

Thank you
Any Questions?

Cupertino ARES/RACES