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Net Control Type III

Part A

Santa Clara County ARES®/RACES
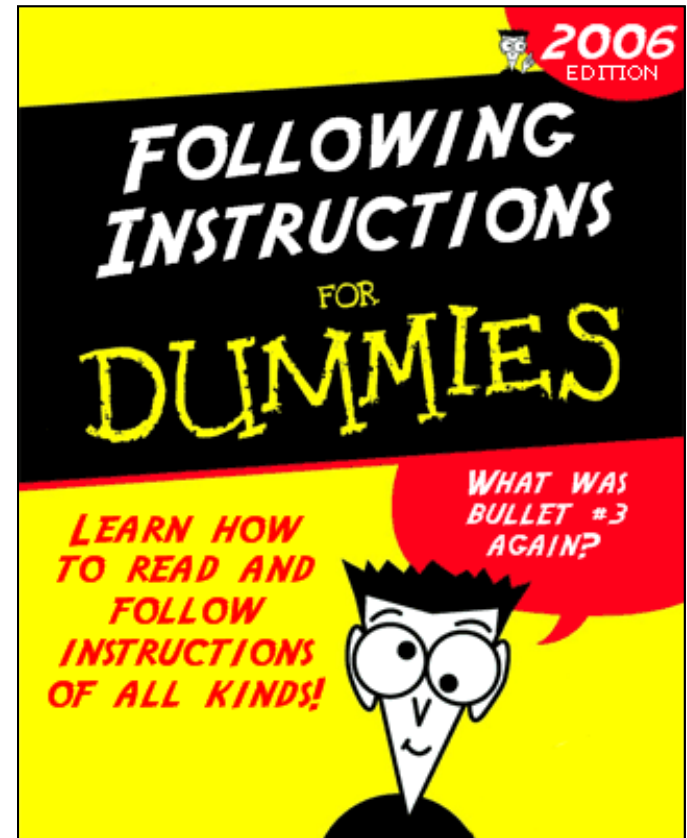
Last Updated: 04-Aug-2013

Remember This?

Lots of talking, lots of emotion

NO Communication!

Housekeeping

- Refreshments

- Pen/pencil & paper

- Cell phones & pagers

- Side conversations

- Questions

- Breaks

- Restrooms

- In case of emergency

Agenda: Net Control Type III, Parts A & B

Net Control Type III, Part A

- Net Control III MAC Qualification
- Santa Clara County Nets
- NCO Attributes and techniques
- Record keeping and logging
- Starting a Net
- Operating a Net
- Damage Report Summaries

Net Control Type III, Part B

- Dealing with challenges
- Working with a scribe
- Equipment for Net Control
- Resource Tracking
- Resource Net for an Event
- Handing off a Net
- Closing a Net

Learning Objectives

At the end of this class, you should be able to:

- Describe the Net Control Type III MAC Qualification
- Describe the purpose and usage of each of the main Santa Clara County nets
- Describe the proper attributes and techniques of a net control operator
- Perform proper record keeping and logging
- Properly start up a net
- Properly operate a net
- Properly run a net to collect Mike-Mike reports
- Properly hand off damage report summaries

N3　N2　N1

Net Control Qualifications

THE NET CONTROL TYPE III QUALIFICATION

Net Control Type III

N3

- Capabilities and services offered
  - Fully independent operator
  - Capable of basic net control assignments without assistance or coaching
  - Net control operator for low to medium traffic nets
  - Scribe for low to medium traffic nets

- Typical Assignments
  - Resource Net Level 1, immediately after incident
  - Resource net for drills and public service events
  - Small to medium city and tactical nets
  - County Command Net NCO
  - Small staging area net control
  - Drills and public service events

Net Control Type II, Type I

- Net Control Type II = Advanced Operator

  N2

  – Medium - to - high traffic nets
    - Resource Net Level 2 and 3
    - Message Net
  – Multiple nets
  – Plan small events
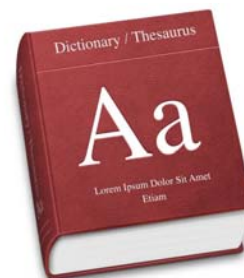
- Net Control Type I = Specialist Operator

  N1

  – Most critical and complex nets
  – Principal interface for planning, design, set-up, operations

- Net Control Type III, Parts A & B focus on N3 qualification
- Net Control Type II course focuses on N2

SANTA CLARA COUNTY NETS

What is an Amateur Radio Net?

- An Amateur Radio Net exists whenever 3 or more operators are in simultaneous contact with each other for the purpose of exchanging information or passing informal or official traffic.

- Open Net
  – Stations call each other directly to pass traffic

- Directed Net
  – Stations call only net control directly, go direct to other stations only with net control permission

Resource Net

- Usually the first net activated at the county level
- Directed net
- Three levels of operation
  - Level 1: Information gathering (initial damage reports)
    - Earthquake Modified Mercalli (Mike-Mike) reports; flood levels; power; etc.
  - Level 2: City EOC check-ins and referral to city tactical nets
    - City EOCs check-in and announce status; individuals referred to city nets
  - Level 3: Coordination of mutual aid; tracking county resources
    - Mobilization (resource check-ins, activations and assignments)
    - Location/Travel tracking (you MUST be in contact while traveling)
    - Demobilization (resource release, tracking during return home)
- Frequencies (http://www.scc-ares-races.org/operations.html)
  - Primary   AA6BT   146.115 (+) 100.0
  - North   W6ASH   145.270 (-) 100.0
  - South   N6NAC   444.625 (+) 110.9 (South of 101 & 85; South San Jose)
  - South Alt   K6SNY   443.275 (+) 107.2 (South of 101 & 85; South San Jose)

Message Net

- Usually the second net activated at the county level
- Directed net, usually with an N2 net control
- Official message traffic between city/agency EOCs and county EOCs
  - Typically between cities/agencies and the County
  - Sometime between cities/agencies
- Formal messages on ICS 213-SCCo message form
- Some informal messages
- All messages and responses numbered and tracked
- Frequencies (http://www.scc-ares-races.org/operations.html)
  - Primary   W6TI   147.360 (+) 110.9   (DX club)
  - Alternate   K6FB   145.450 (-) 100.0 / 442.575 (+) 100.0
- The packet network is also used for non-emergency message traffic. See the Packet Operations classes for more information.

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Santa Clara County Nets

- **Command Net**
  - Official traffic between Operational Area command staff and EOCs
  - Not intended for field use
  - Primary: WB6ZVW   442.500 (+) 100.0
  - Alternate: K6SNY   443.275 (+) 107.2

- **Hospital Net**
  - Official traffic between hospitals and County Dept. of Public Health
  - N6NFI: 145.230 (-) 100.0

- **EOC-to-EOC Net**
  - Commercial radio may be used directly by EOC personnel
  - Typically for command and control and informal messages
  - May be active before hams arrive on scene; may be staffed by non-hams, some with little or no radio or emcomm training

Santa Clara County Nets

- Resource Net for a drill or event
  - Simplified version of full Resource Net Level 3
  - Used for pre-planned drills and public service events
- HF Net
  - Interface with ACS coastal region and state
  - Interface with NTS
- Others
  - County radio room staff support a variety of other nets
  - Control 10, region, satellite,

Tactical Nets (including City/Agency Nets)

- Established when and where needed
  - Staging areas, checkpoints, rovers, shadows
  - Each city has one or more tactical frequencies; one is for main city net
- Each city activates their city net as soon as possible
  - Handle local resource check-ins, notifications
  - Check-in here to be released to the county
- Localized, often informal messages
  - "checkpoint 3 reports Dead Man's creek at 1 foot below flood level …"
  - "rover 2 reports all runners have now passed rest stop 4 …"
- May also include formal messages
  - Ex. Resource request from school to city
- Usually a directed net, but may start up as an open net
- Frequencies (http://www.scc-ares-races.org/operations.html)
  - May also be assigned at time of activation

Good operators are made, not born!

KEY ATTRIBUTES AND TECHNIQUES OF A NET CONTROL OPERATOR

The Net Control Operator

- The most essential part of any emergency net is the character and skill of the net control operator (NCO)
- The NCO coordinates all net activity and shapes the efficiency (or inefficiency) of the net operation
- The NCO sets the standard for all others on the net
  - Other operators will pattern their behavior after you
- Who is the NCO?
  - The role may be assigned in advance
  - For spontaneous incidents, often the first station on the air
  - The role may be handed off from one station to another

Personal and Mental Fitness
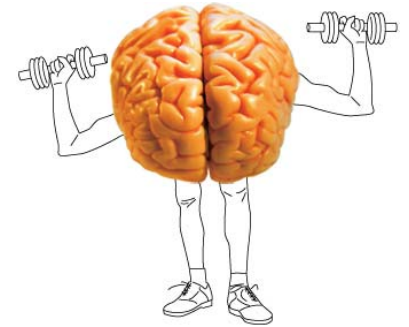
- Can handle physical and mental stress for long periods
  - Physical and mental fitness are essential
  - Self manages stress and fatigue – takes frequent breaks
- Can listen and respond in a noisy/chaotic environment
  - Net in one ear, EOC discussions in the other
  - Different net in each ear (stereo headphones, one ear per VFO)
  - Frequent interruptions, distractions
- Must have good hearing
  - Copy message traffic in difficult or noisy situations
  - Copy call signs quickly and accurately

Station Quality & Preparation

- Must have a clean and commanding signal
  - Antenna height & gain, RF power, audio quality
- Must have reliable power
  - AC, battery, generator, station grounding, emergency lighting, fuses
- Properly equipped
  - Radio manuals!
  - Headset (stereo), footswitch, forms, maps, procedures, frequency lists, telephone numbers, notepads, pens, …
- Prior planning and configuration
  - Radio memories, modes, menus, configurations, cabling, labels
- Solid radio operations knowledge
  - Frequency changes, multiple frequencies, duplex/simplex/tones

Operating Technique

- Verbal communications
  - Maintain a clear speaking voice
  - Control tone of voice, even under stress
  - Have a good command of the English language
  - Use plain English, no 10-codes, no Q-codes, etc

- Radio Technique
  - Make only necessary transmissions
  - Use procedures and techniques to reduce number of transmissions
  - Use a minimum of works to convey the message
  - Pause before speaking; allow repeater to key up
  - Leave gaps between transmissions for others to break in
  - If repeaters are linked, leave longer pause
  - Drop PTT when not speaking; avoid open mic or dead air

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What's Wrong with this Picture?

Resource Net Example:

- NCO: AA6AA, net control … (no response)
- NCO: AA6AA (phonetically) , this is net control
- AA6AA: This is AA6AA, sorry, I had my volume turned down, go ahead
- NCO: AA6AA, it's been 15 minutes, uh, just checking on your progress
- AA6AA: oh, well, I'm still en route, almost there
- NCO: QSL. Could you tell me your odometer reading please?
- AA6AA: oh, o.k., uh, odometer is um, let me see, … , odometer is 23.4
- NCO: No decimal points please
- AA6AA: oh, o.k. uh, odometer is 23
- NCO: I need the last three digits of your odometer, in whole miles, no decimal point
- AA6AA: oh, o.k. uh, odometer is 123

What's Wrong with this Picture?

- NCO: and your location please?
- AA6AA: oh, uh, I'm on 101 South and … (keeps mike keyed) … coming up on … (keeps mike keyed) … uh … (keeps mike keyed) … Lawrence Expwy
- NCO: AA6AA cool, thanks dude!

(Net Control moves on to other things)

(but OOOPS! … AA6AA forgot to ID)

- AA6AA: AA6AA
- NCO: AA6AA go ahead …

Is This "Clear and Concise" Communication?

Negative!

How About This Instead?

- NCO: AA6AA, health and welfare check
- AA6AA: odometer 123, 101 S. at Lawrence Expwy, AA6AA
- NCO: AA6AA roger …

Is This "Clear and Concise" Communication?

Affirmative!

Standard ITU Phonetics

A - alfa (AL-fa)
B - bravo (BRAH-voh)
C - charlie (CHAR-lee)
D - delta (DELL-tah)
E - echo (ECK-oh)
F - foxtrot (FOKS-trot)
G - golf (GOLF)
H - hotel (hoh-TELL)
I - india (IN-dee-ah)
J - juliet (JU-lee-ETT)
K - kilo (KEY-loh)
L - lima (LEE-mah)
M - mike (MIKE)

N - november (no-VEM-ber)
O - oscar (OSS-cah)
P - papa (pah-PAH)
Q - quebec (keh-BECK)
R - romeo (ROW-me-oh)
S - sierra (see-AIR-rah)
T - tango (TANG-go)
U - uniform (YOU-ni-form)
V - victor (VIK-tah)
W - whiskey (WISS-key)
X - x-ray (ECKS-RAY)
Y - yankee (YANG-key)
Z - zulu (ZOO-loo)

- If there is a chance of misunderstanding, spell it out with "I spell":
  - "go to Kay Street" → "go to Kay, I spell kilo alpha yankee, Street"

Numbers and Time

0 - zero (ZEE-row)   5 - five (FY-ive)

1 - one (WUN)   6 - six (Sicks)

2 - two (TOOO)   7 - seven (SEV-vin)

3 - three (THUH-ree)   8 - eight (Ate)

4 - four (FOH-wer)   9 - nine (NINE-er)

- Zero is always "zero"; never "oh"
- Decimal point is "decimal" or "point"; never "dot"
- Multi-digit numbers are spoken as a string of single digits:
  – 600 = "six zero zero"
- Often preceded by the word "figures"
  – "Please copy 109" → "Please copy figures one zero niner"
  – "Requesting 16 blankets" → "Requesting figures one six blankets"
- Time is always 24 hour local time

Message Handling Prowords

- I SPELL — Ex: "I spell Alfa, Bravo…"
- FIGURES — Ex: "Figures Wun, ZEE-row, NINE-er" (= 109)
- INITIAL(S)/LETTER GROUP — A group of one or more letters - Ex: ARES/RACES
- AMATEUR CALL — An amateur call sign; use mixed group if contains "/"
- MIXED GROUP — A group of mixed letters and numbers: Ex: AF3JJ/4
- MIXED GROUP FIGURE(S) — A mixed group starting with one or more figures Ex: 2/A
- BREAK — Separate different parts/lines of a message
- SAY AGAIN — Repeat – usually used with a qualifier …
- WORD AFTER — Ex: "Say again word after…"
- WORD BEFORE — Ex: "Say again word before…"
- ALL AFTER — Ex: "Say again all after…"
- ALL BEFORE — Ex: "Say again all before…"
- BETWEEN — Ex: "Say again between…   and…"
- ROGER — Received and understood. (Does NOT mean "yes)
- AFFIRMATIVE — "Yes"
- NEGATIVE — "No" or "not received"

Develop & Maintain Proficiency

- Being a high quality operator isn't hard, but it takes practice
- Developing and maintaining proficiency is a personal responsibility
- Recommended activities:
  - Practice logging on any/all nets you listen to
    - Be ready to fill in if Net Control needs a break, has equipment failure
  - Listen to the pros – Santa Clara County Fire 154.250
  - Message Passing Class is essential for Message Net NCOs
  - And Practice, Practice, Practice
    - Weekly SPECS, SVECS and City Nets
    - Quarterly drills; public service events
    - County-wide Communications Drills
  - Work on MAC qualification levels

Stay Current, Stay Informed

- Visit the County web site often

- Check the Announcement space

- Check the Operations page
  - Contact Info, Forms, Frequency Lists, Go Kit Lists, Standards and Procedures, … and more
  - Read the whole page

- Check for updates often

- Take personal responsibility for keeping yourself and your equipment up-to-date

BREAK

Tracking activities and message traffic

RECORD KEEPING AND LOGGING

Form 1

- Main point is good documentation
- A simple writing tablet works
- Lots of uses
  - … when you run out of the right form
- Turn in to supervisor at end of shift
  - (yes, even informal notes!)
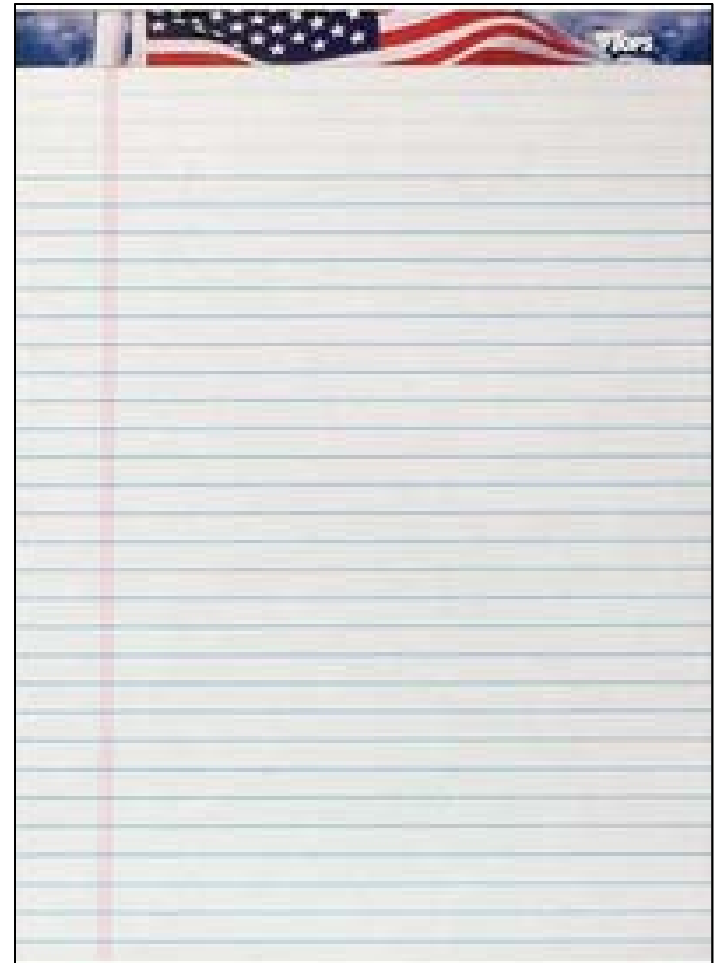
"Phone" Message Pad

- Two part, non-carbon is best
- Top page usually sticky
- Brief, tactical messages between staff members
  - Message net NCO to packet net NCO
  - Any NCO to shift supervisor
- Tactical messages between field and staff
  - Request for contact on phone or alternate net

Our example NCO: Herman Munster

ICS 211A – Communications Check-In

ICS 211A CHECK IN LIST (COMMUNICATIONS)	1. INCIDENT NAME: M. H. Mummy Race		2. DATE: 10/31/09	3. INCIDENT NUMBER: RIP-13-13T		4. CHECK IN LOCATION ICP – Funeral Home
5. INFORMATION						
PERSONNEL NAME	CALL SIGN	AGENCY	TIME IN	TIME OUT	HOURS	REMARKS
Herman Munster	W6XRL4	CARES	2330			

http://www.scc-ares-races.org/operations.html

- EVERYONE signs in/out on a 211
- If one doesn't exist, start one!
- Our version: ICS 211A-SCCo

ICS 214 – Unit Activity Log

- Our version: ICS 214-SCCo

- A record of all major activities and events

- EVERYONE fills out a 214
  - Individuals: a unit of one
  - Teams: Team leader
  - Start when you get assignment (home)

- Occasional message traffic?
  - Just log it right on the 214

- Use multiple pages if necessary

- Turn in to supervisor at end of shift

- Instructions on back

http://www.scc-ares-races.org/operations.html

Example 214 (Herman's personal unit log as net control operator)

UNIT LOG ICS 214-SCCo ARES/RACES	1. Incident Name and Activation Number *Mockingbird Heights Mummy Race* *RIP-13-13T*		2. Operational Period (Date/Time) *10/31/09*	*11/1/09*
			From: *20:00* **To:**	*04:00*

3. Unit Name / Tactical Call / Designators *Tactical Net Control*	4. Unit Leader (Name, Call Sign, ICS Position) *Herman Munster, W6XRL4*

5. Personnel Roster Assigned

Name	Call Sign	ICS Position	Home Base/City

6. ACTIVITY LOG

Time (24:00)	Major Activities & Events / Occasional Messages (From / To / Msg# / Msg Text)
2300	*Departing home*
2330	*Arrive at event ICP- Gateman, Goodbury & Graves funeral home*
2345	*Net control briefing*
0000	*Begin tactical net for race – see ICS 309*

Exercise: ICS-214 Unit Log

- Create an ICS-214 log for the following scenario in City of Xanadu (XND)
  - Incident is "Training Class Exercise", activation code XND-13-TCE
  - The class will begin at 0900 hours and end at 1200 hours
  - You will be tactical call sign will be: "Student #"
  - You leave home at 0815 hours
  - You arrive at the training location at 0845 hours
  - The class starts at 0900

Exercise: Start an ICS-214 Activity Log

UNIT LOG ICS 214-SCCo ARES/RACES	1. Incident Name and Activation Number *Training Class Exercise* *XND-13-TCE*	2. Operational Period (Date/Time) *08/03/2013* *08/03/2013* **From:** *0900* **To:** *1200*

3. Unit Name / Tactical Call / Designators *Your Tactical Call Sign*	4. Unit Leader (Name, Call Sign, ICS Position) *Your Name, Your Call Sign*

5. Personnel Roster Assigned

Name	Call Sign	ICS Position	Home Base/City

6. ACTIVITY LOG

Time (24:00)	Major Activities & Events / Occasional Messages (indicate From / To / Msg# / Msg Text)
0815	*Left Home*
0845	*Arrived at training class location*
0900	*Training class started*

7. Prepared By (Name, Call Sign, ICS Position) *Your Name, Your Call Sign*	8. Date & Time Prepared *08/03/2013 - 1015*	9. **Page __1__ of __1__**

ICS 309 – Communications Log

- Our version: ICS 309-SCCo

- Net Control Operators and stations with high message traffic

- Columns help organize key message tracking info

- Does not replace 214
  - EVERYONE fills out a 214

- Turn in to supervisor at end of shift

- Instructions on back

http://www.scc-ares-races.org/operations.html

Example 309 (Resource Net)

Example: Tracking Herman from home to event ICP

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number Mockingbird Heights Mummy Race RIP-13-13T		2. Operational Period (Date/Time) From: 10/31/09 2000 To: 11/1/09 0400	
3. Radio Net Name (for NCOs) or Position/Tactical Call Resource Net			4. Radio Operator (Name, Call Sign) Wolf Man, W6WOOF	

5. COMMUNICATIONS LOG

Time (24:00)	FROM Call Sign/ID	Msg #	TO Call Sign/ID	Msg #	Message
. . .	. . .				. . .
2300	W6XRL4				Leaving home – 1313 Mockingbird Lane ODO 123
2315			W6XRL4		H&W - Highway 13 – ODO 141
2330	W6XRL4				Arrived ICP ODO 150; Check-Out

- Recommended – instead "NC" or "NCO" for yourself, leave the call sign field blank
  - Makes it easier to see which messages were from/to field operators

Example 309 (Event tactical/message net)

Example: Herman Munster's net control log

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number Mockingbird Heights Mummy Race RIP-13-13T			2. Operational Period (Date/Time) From: 10/31/09 2000 To: 11/1/09 0400	
3. Radio Net Name (for NCOs) or Position/Tactical Call Event Tactical Net				4. Radio Operator (Name, Call Sign) Herman Munster, K6XRL4	

5. COMMUNICATIONS LOG

Time (24:00)	FROM Call Sign/ID	FROM Msg #	TO Call Sign/ID	TO Msg #	Message
0000	W6DRAC				Check-In – Assigned tactical Blood bank 1 (BBANK1)
0005			All Checkpoints		First mummy on course; advise when at your station
0015	BBANK1	107	MH-ICP	204	Blood bank is running short of 0+ blood
0020	CP1				First mummy passing checkpoint 1

- Use Msg # column for formal message nbrs; otherwise blank
- For tactical messages, you can leave to/from blank if yourself

Exercise: ICS-309 Communications Log

- Create an ICS-309 log for the following scenario in City of Xanadu (XND)
  - Incident is "Training Class Exercise", activation code XND-12-TCE
  - You take over as NCO for the city's tactical net at 11:00 AM
  - Your scribe is Herman Munster, W6XRL4
  - You receive a message from Shelter 2 at 11:05 AM
    - Their msg # S2-013; your # XND106; subject = "Bed count"
  - Joe Hamm, KJ6HAM, checks in at 11:10 AM; assigned tactical call "Rover 1"
  - Betty Ham, KB6HAM, checks in at 11:15 AM; assigned tactical call "Shelter 3"
  - 11:20 AM Rover 1 reports en route to Disaster Drive
    - odometer 123, North Ave and 1st street
  - You send a message to Shelter 3 at 11:30 AM
    - Your # XND107; their msg # S3-004; subject = "Inventory checklist"
  - 11:40 AM Rover 1 reports arrived at Disaster Drive; conducting damage survey
  - You send to All Shelters at 11:50 AM, your # XND110, "Exercise complete"
    - Their msg #s: S1-022; S2-014; S3-005
  - You close the net closed at 12:00 PM

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Exercise: ICS-309 Communications Log

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number Training Class Exercise XND-12-TCE	2. Operational Period (Date/Time) From: 08/03/2013 0900 To: 08/03/2013 1200
3. Radio Net Name (for NCOs) or Position/Tactical Call Xanadu Tactical Net		**4. Radio Operator (Name, Call Sign)** Your Name, Your Call Sign

5. COMMUNICATIONS LOG

Time (24:00)	FROM Call Sign/ID	FROM Msg #	TO Call Sign/ID	TO Msg #	Message
1100	----	---	----	---	Net Control = <call sign>; Scribe = W6XLR4
1105	Shelter 2	S2-013		XND106	Bed count
1110	KJ6HAM				check-in – assigned tactical = Rover 1
1115	KB6HAM				check-in – assigned tactical = Shelter 3
1120	Rover 1				en route to Disaster Drive; ODO 123;
------					@ North Ave & 1st St.
1130		XND107	Shelter 3	S3-004	Inventory checklist
1140	Rover 1				Arrived Disaster Drive; conducting damage survey
1150		XND110	All Shelters		Exercise complete --- Confirmation #s follow
------			Shelter 1	S1-022	
------			Shelter 2	S2-014	
------			Shelter 3	S3-005	
1200	----	---	----	---	Net closed

Exercise: ICS-309 Communications Log

- Don't forget the bottom of the form!

6. Prepared By (Name, Call Sign)	7. Date & Time Prepared	8.
Your Name, Your Call Sign	*08/03/2013; 1200*	Page __*1*__ of __*1*__

- What about your ICS-214 Activity Log?

6.	ACTIVITY LOG
Time (24:00)	**Major Activities & Events / Occasional Messages** (indicate From / To / Msg# / Msg Text)
. . .	*. . .*
1100	*Took over as NCO for Tactical Net – see ICS-309*
1200	*Closed Tactical Net*

Other Standard Forms

- Message Net
  - ICS 213-SCCo   (taught in Field Communications course)

- Other county OES forms
  - City Scan / Flash Report, Logistics Request Form, RIMS forms

- Hospital Net
  - DEOC-9 Beds – beds report
  - DEOC-9 (long and short form) status report

- Whatever the form:
  - Proceed in an orderly sequence; follow or create field numbers
  - 5 words at a time
  - Standard phonetics, numbers, prowords

Summary of Logging and Record Keeping

- Everyone signs in/out on a 211A Communications Check-in (ICS 211-SCCo)

- Everyone fills out a 214 Unit Activity Log (ICS 214-SCCo)
  - Start it when you get your assignment (before you leave home)

- Net control operators also fill out 309 Communication Log (ICS 309-SCCo)
  - Does not replace the need to maintain a 214 Unit Activity Log

- Must be legible or its useless!

- Hand in your logs, notes, etc., at the end of your shift

"By failing to prepare you are preparing to fail."

-- Benjamin Franklin

It's all about preparation

STARTING A NET

Preparing to Start a Net

- Prepare your station
- Prepare your script
- Prepare yourself
- Go

- The amount of preparation depends on the situation
- Think about the impact of any potential problems and plan accordingly; common sense should prevail
- In real, county-wide incidents, failure to adequately prepare can result in delays and disruptions to our response

Prepare Your Station

- Prepare your work-space. Be NEAT!!!
    – Pen, pencil, paper
    – Visible clock (24-hour clock is convenient)
    – Frequency lists, contact numbers/info
    – Forms (Form 1, phone message, ICS 214, ICS 309, ICS 213, …)
    – Maps (Thomas Guide, others as appropriate)
    – Water/liquids for drinking
    – Place regularly accessed items within easy reach
- Prepare your radio & know how to use it
    – Oriented in a comfortable position
    – Check all connections, settings – especially for shared stations
    – Skim the manual or cheat sheet and keep it handy
    – Perform a radio check

Prepare the Script

- Main county nets have prepared scripts
  - Consult the county manual for each net in county radio room
- SPECS & SVECS also have prepared scripts
  - Consult their websites
- If no prepared script, take the time to write one out:
  - Introduction
    - Your call sign, purpose of the net, open or directed, net control tactical call sign, you can not dispatch help – call 911, how you will take check-ins
  - Regular updates:
    - Purpose of net, open or directed
  - Closing
    - Closing net, thank the participants and the owners/operators of the repeater, returning frequency to normal use

Prepare Yourself, and Go!

- Make sure you get a briefing
- Learn/know the procedures, traffic flow of the net
- Prepare your log sheet, note paper
- Don't start until you are ready; never let yourself get "behind"

- When you're ready (and not before then):
  - Take a deep breath; Relax
  - Check that the frequency is clear
  - Key up, breathe, read the introduction

Basic Template for Net Control Script

- Opening
  - "Is the frequency clear?"
  - "This is <call sign> setting up a directed net for <purpose>."
  - "The tactical call sign of net control is <tactical call sign>."
  - State whether or not you have ability to dispatch resources.
  - State what to do if immediate help is needed. (call 911 or city tactical)
  - "Are there any stations with emergency traffic?"
  - "Does any station have traffic for net control?"
  - "Net control will now take check-ins according to <method>"
- Regular Intervals
  - ID with FCC call sign every 10 minutes
  - Purpose of net and operating mode (directed/open) as appropriate
- Closing
  - Thank owners and operators of repeater(s); announce that frequency is returned to normal use

Example: Level 1 Resource Net

- "This is _____, acting as Net Control Operator for the Santa Clara County ARES/RACES Resource Net. I will be gathering a snapshot of information regarding the <incident type> that just occurred. I have no ability to dispatch resources at this time. If you need immediate help, use 9-1-1 to contact your local emergency response center or try to raise someone on your city tactical frequency.

- "Is there any emergency traffic? Is there any traffic for net contro?"

- "I am ready to receive brief reports from any operator who has pertinent information. We want observations only from your current locations – do not go looking for problems.

- "I will ask for reports by city. <Describe the reporting scale.> I'll take call signs in groups of five. When you hear your call sign, report using the following format: your call sign, your city, <report format>, and call sign."

- "I'll take the first five call signs with more than <say minimum>"

Exercise: Resource Net Level 1 Start Up

Situation (pick one):

1. You are watching TV when you learn that hackers have reportedly attacked the telephone network. Northern California and parts of Nevada are reported to be affected. You pick up your phone and have no dial tone.

2. A dam located near you ruptures and you observe flash flooding in your area.

3. You walk outside and smell a strong chemical odor (such as ammonia) but you don't notice any nearby activity that would account for the smell.
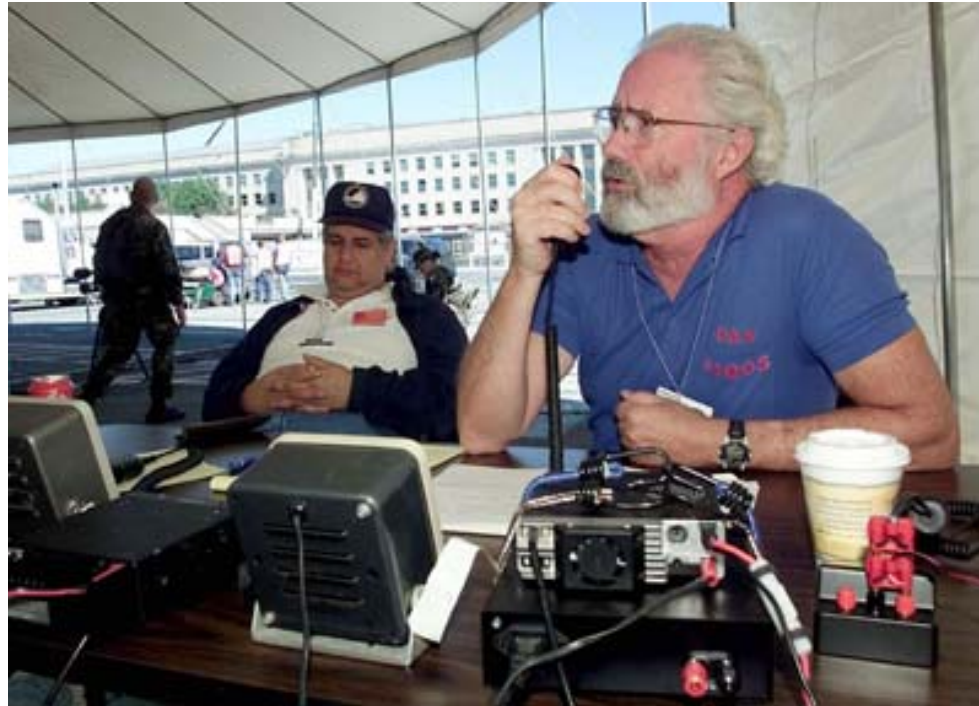
Exercise:

– Prepare an intro script for a Level 1 Resource Net

– Conduct a Level 1 Resource Net to gather reports

BREAK

Putting it all together

OPERATING A NET

Directing Traffic

- Enforce net discipline (professionally)
  - "<call sign> go direct and turn it back to me when you are done"
- Direct traffic in an effective manner for all net participants
  - Control tempo and pace
  - Watch for and help less experienced operators
- Prioritize traffic according to precedence
  - Emergency, Priority, Routine, Health and Welfare
- Control traffic flow
  - "All stations standby" or "All stations hold your traffic"
- Give instruction in a way which avoids "doubles"
  - "Station ending with zulu, go ahead"
- Allow non-net-related traffic during breaks in net traffic

ID Regularly

- Lots of stuff to remember to do regularly
  - Announce your tactical call
  - Announce the purpose of the net
  - ID with your FCC call sign every 10 minutes

- Hint: Put it all together every 10 min
  - "This is <call sign>, net control for the Santa Clara County Resource Net. This is a directed net."

- Make sure all stations are identifying regularly
  - "Roger checkpoint 1, I'll turn it back to you for ID"

Track/Update Field Resources

- Perform regular health & welfare checks of field stations
  - "We will now do a health and welfare roll call by tactical call sign. When called, answer with your tactical call, identify any help or resources you may need, and finish with your FCC call sign"
  - Usually every 30 min or so, depending on situation & traffic volume
- Provide information to field stations regularly
  - Warnings and advisories (weather, road closure, etc.)
  - Event status (first bib number in race, location of parade, etc.)
  - Be sure to indicate "drill traffic" when appropriate
  - Other announcements received from supervisor
    - Remember, the media is listening
    - Shift supervisor will coordinate with the Public Information Officer (PIO)

Busy Nets

- Make sure to leave space regularly
  - Allow all repeaters to drop plus a few additional seconds
  - If stations are too persistent, you may need to force the space:
    - "Are there any stations with emergency or priority traffic?"
    - Are there any station that have been unable to reach net control?"
- When multiple stations standing by, regularly announce list
  - Reduces stress for net members
- Maintain calm at all times, help field ops remain calm
  - Field operators will follow the lead of the NCO

Dealing with Stress and Fatigue

- Don't start until you are ready
- Control the pace of the net according to your ability
  - Work at your speed
  - If you need to, put the net on hold
- Take periodic breaks
  - As coordinated with teammates and supervisor
- Maintain proper hydration and nutrition
- Rotate positions/duties with team members
  - Start as scribe → net control → take a break → scribe → net control
- Exercise patience and understanding with other operators
  - They are likely fatigued and/or stressed, too
  - They will follow your lead if you show a calm and deliberate approach

Resource Net Level 1

MIKE MIKE REPORTS

Why "Mike-Mike"?

- Scenario: You are the emergency manager for the county

- Given this information:

- Would you activate the EOC or not?

- The Modified Mercalli ("Mike-Mike") scale attempts to:
  - Eliminate subjective descriptions such as "moderate" or "heavy"
  - Quantify the damage based on commonly observable events
    - "Pictures move" vs. "buildings collapse"
  - Assigns a number for quick transmission, easy summarization

What is the Mike-Mike scale?

- Modified Mercalli ("MIKE-MIKE") scale
  - Mike-Mike 1 – Not felt at all
  - Mike-Mike 2 – Felt by persons at rest, on upper floors
  - Mike-Mike 3 – Felt indoors; hanging objects swing
  - Mike-Mike 4 – Windows, dishes rattle; like heavy truck passing or jolt
  - Mike-Mike 5 – Pictures move, doors swing, small items on floor
  - Mike-Mike 6 – Glassware broken, books off shelf, floor lamps topple
  - Mike-Mike 7 – Furniture broken, cannot stand, chimneys fall
  - Mike-Mike 8 – Buildings collapse
- Wallet cards available on county web site
  - http://www.scc-ares-races.org/operations.html
- Typical response to request for damage reports
  - "KE6AGJ, Los Altos, Mike-Mike 4, KE6AGJ"

Self Alerting Incident - Earthquake

- You feel an earthquake, what do you do first?
  - Ensure your personal safety
  - Ensure the safety of your family

- Tune to Resource Net (146.115 + 100.0 Hz)
  - If you can't reach this repeater, use either the North or South repeater
  - Be aware that individual cities may gather initial reports on city tactical frequencies and then report totals to resource net.

- Prepare your workspace, your script and yourself

- Check for an active net
  - "This is _____ calling from {city, County EOC, etc.}; is there an active net on this repeater at this time?"

Self-Alerting Incident - Earthquake

- "This is <call sign>, Resource Net Control. This net is intended to gather brief damage reports from around the county, I am NOT able to dispatch help for acute situations. If you need immediate help, use 9-1-1 to contact your local emergency response center or try to raise someone on your city tactical frequency.

- "Is there any emergency or priority traffic?

- "I will take reports, five at a time, by severity, using the Mike-Mike scale. When I call you, respond with your call sign, city, Mike-Mike number, and call sign.

- "I'll take the first five call signs with Mike-Mike 7 or higher."

Mike-Mike Summary Form

SCCo ARES/RACES Mike-Mike Summary	1. Incident Name (if any):								2. Incident Date / Time:					
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
Campbell														
Cupertino														
Gilroy														
Los Altos														
Los Altos Hills														
Los Gatos														
Milpitas														
Monte Sereno														
Morgan Hill														
Mountain View														
NASA/Ames														
Palo Alto														
San Jose														
Santa Clara														
Saratoga														
Stanford Univ														
Sunnyvale														
Other:_____														

6. Prepared by (Name, Call Sign)	7. Date & Time Prepared	Page 1 of 1

Summarizing Mike-Mike Reports

CITY	MM-1	MM-2	MM-3	MM-4	MM-5	MM-6	MM-7	MM-8
Campbell	⊦⊦⊦⊢	IIII	II					
Cupertino			III	⊦⊦⊦ I	IIII	II		
Gilroy								

- Get worst case reports first, then move down in severity
  - "Are there any reports of Mike Mike 7 or higher?"
  - "How about any reports of Mike Mike 5 or higher?"
- Get responses from each city
  - No response does NOT mean no damage!
  - Use EC list or frequency list in your go kit for list of city names
- Continue until you have a complete picture
  - Even if no heavy damage is reported
  - Knowing (for certain) that damage is minimal is important, too!

Example – Resource Net Level 1

- Recent county drill included Resource Net Level 1
- Situation
  - Simulated earthquake
  - Resource Net Level 1 established
  - The net started like this …

- Critique
  - What techniques were used which made this effective?
  - What improvements could be made?

Exercise: Resource Net Level 1 - Earthquake

- Need 1 volunteer to conduct Resource Net Level 1 for an earthquake

- Use a pre-printed or hand-made MM summary form

- Everyone else, report using the last digit of your phone number. For a 0, report 1; for a 9, report 8.

Maintaining Continuity

HANDING OFF DAMAGE REPORT SUMMARIES

Handing-off Damage Report Summaries

- Resource Net Level 1 is usually started at a remote location
  - Whoever is first on the net, wherever they are
- At some point net control may be asked to summarize the reports so far or hand off the totals to another net control
- Be prepared to hand-off a summary at any time
  - Think about how to summarize your report before you get started
- Mike-Mike Summary Report form has instructions for transmitting the summary data on the back of the form

Exercise: Handing-off Damage Summaries

- Need another net control volunteer to receive hand-off of MM summary
- First net control sends summary to second net control

SUMMARY

Summary

You should now be able to:

- Describe the Net Control Type III MAC Qualification
- Describe the purpose and usage of each of the main Santa Clara County nets
- Describe the proper attributes and techniques of a net control operator
- Perform proper record keeping and logging
- Properly start up a net
- Properly operate a net
- Properly run a net to collect Mike-Mike reports
- Properly hand off damage report summaries

Next Class: Net Control Type III, Part B

Net Control Type III, Part A

- Net Control III MAC Qualification
- Santa Clara County Nets
- NCO Attributes and techniques
- Record keeping and logging
- Starting a Net
- Operating a Net
- Damage Report Summaries

Net Control Type III, Part B

- Dealing with challenges
- Working with a scribe
- Equipment for Net Control
- Resource Tracking
- Resource Net for an Event
- Handing off a Net
- Closing a Net

Thank You!