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2015 Year End Summary
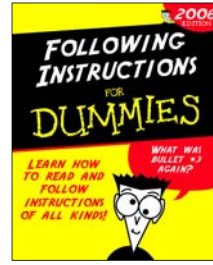
Updates and Review

Santa Clara County ARES®/RACES

Revised: 10-Dec-2015

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Housekeeping

- Refreshments
- Pen/pencil & paper
- Cell phones & pagers
- Side conversations
- Questions
- Breaks
- Restrooms
- In case of emergency

FOLLOWING INSTRUCTIONS FOR DUMMIES — 2006 EDITION. LEARN HOW TO READ AND FOLLOW INSTRUCTIONS OF ALL KINDS! WHAT WAS BULLET #3 AGAIN?

Agenda

- An update on changes that have occurred during the past year, plus a review of some key procedures.
- Topics covered:
  - Packet
  - Data Network Infrastructure
  - Net Control
  - Audio Excerpts
  - Forms Review
  - Mesh / Wi-Fi Review
  - Training Updates

Packet Review

2015 Year End Summary

Santa Clara County ARES®/RACES

Revised: 05-Dec-2015

FCC/User/Personal vs Tactical Calls

- FCC/User/Legal Call Sign
  - Identifies a single person as an operator
  - Follows the person
  - Independent of assignment, function, etc.
  - Used for check-in, check-out, personal requests

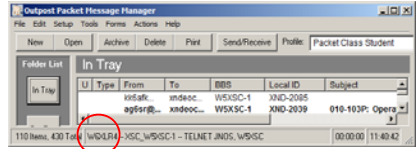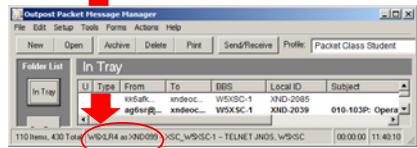- In contrast, a Tactical Call identifies a location or function…

FCC/User/Personal vs Tactical Calls

- Tactical Call Sign
  - Identifies a function or location
    - Shelter, fire station, EOC, Staging
  - Does not change when the operator changes
  - Used for activities of the location/function
  - Six characters long
    - Three letter prefix unique to the Served Agency
    - Three character suffix unique to the location

- Examples for Xanadu Drill City
  - XNDEOC   XND001   XNDEV2

Outpost Shows Which Call Sign is Used

- FCC Call: Only the call sign is shown

- Tactical Call: "… as XXXXXX"

Manual Login with Tactical Call

- Call sign of TNC determines call sign that BBS sees for login/connect
  - TNC:
    - *CMD:* MYCALL W6XRL4
    - *CMD:* CONNECT W5XSC-1
  - W5XSC BBS: connects user and places in W6XRL4 mailbox
- To login manually (no Outpost) with a tactical call such as XNDEOC:
  - TNC:
    - *CMD:* MYCALL XNDEOC
    - *CMD:* CONNECT W5XSC-1
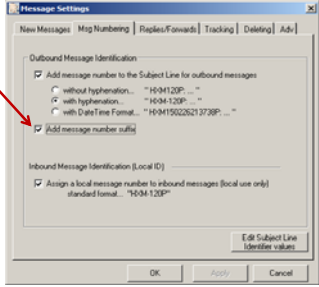 - W5XSC BBS: connects user and places in XNDEOC mailbox

Manual Login with Tactical Call - ID

- Need to ID every 10 minutes and at end of session. On TNC:
  - Disconnect from BBS
  - In command mode, type
  - *CMD:* CONVerse   ← Enters converse mode; whatever is typed is sent out

    FCC ID = W6XRL4; Tactical Call = XNDEOC

    <CTRL-C>   ← Returns to command mode
  - *CMD:*

At end of session, switch MYCALL back to normal:

CMD: MYCALL W6XRL4

Message Number "P" Suffix

- **The P suffix is added to the message number by Outpost**
- **It does not mean that it was a packet message, it just means that Outpost assigned the number**
- The P was added to reduce the possibility of duplicate message numbers from other message forms
- **Box should be checked**

Message Numbers

- Don't change the message number you are given!
- If you are given:

- Then type

- It's that simple.

PACKET OPERATIONS

Packet Operator Field Activities Summary

- **Mobilize to Assignment Location**
  - **Use FCC call for communications**

- **Execute During Operational Period**
  - **Use Tactical Call for location message**
  - **Use FCC call for personal messages**

- **Demobilize and return home**
  - **Use FCC call for communications**

Mobilize To Assignment

- Upon arrival at the site
  - Sign in on ICS 211 Check In List
  - Check in with site supervisor
  - Update your 214
- Get briefing from previous operator
- Assess packet equipment
  - Radio settings and connections
  - TNC settings
- Check in to assigned voice net

Prepare/Check Outpost

- Check Outpost settings before transmitting
  - Correct BBS
  - Frequency
  - TNC settings
- If emergency, remove "xsctest" from bulletin list

- If needed, set up your User Identification with your **Tactical Call** for the Served Agency check in message
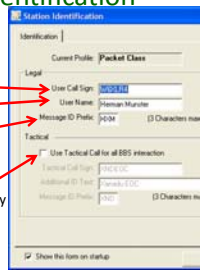
Served Agency Check In Message

- Begin the Operational Period with a packet check in message to the Served Agency
- Send a text message using your assigned (Tactical or FCC) call sign with the following information
  - Name and Call of Packet Operator
  - Name and Tactical call of Packet Station, if used
  - Time the packet station was operational
- Update personal 214
- Do a "Send/Receive" to get any pending messages and bulletins
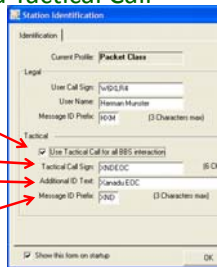- Begin operations

Opening Outpost – User Identification

- Using your FCC call sign
  - User call sign
    - Your FCC call sign
  - Name
    - Your full name
  - Message ID Prefix
    - 3 letter prefix used in message number
    - Set according to your served agency policy
    - Or use your initials
- Unclick - **Use Tactical Call**
  - When fields are greyed out – using FCC call

- When you take over a shift as a Packet Operator, you will need to change User Call sign and User Name

Operational Period Using a Tactical Call

- To use a Tactical Call
  - Check "Use Tactical Call …" Outpost will connect to the BBS using this call sign
- Fill in Tactical Call Sign
- Additional ID Text
  - Sent along with FCC call sign and tactical call in final ID packet
- Message ID Prefix
  - 3 letter prefix used in message number
  - Set according to your served agency policy

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During Operational Period

- Send, receive, process packet messages
- Check for new bulletins and follow any new instructions
- Maintain voice radio contact
- Maintain ICS 214 Unit Log
- If prolonged period of inactivity (30+ minutes)
  - Perform a "Send/Receive" operation to verify connection with BBS
  - Message not needed
- Report any problems as instructed
  - Site supervisor
  - Voice net

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Demobilization

- Send a text message to the Served Agency using your assigned (Tactical or FCC) call sign
  - Name and Call of Packet Operator
  - Name/Tactical call of Packet Station, if used
  - Time the packet station is assigned to a new operator
  - Or
  - Time the packet station is being deactivated
- Brief the incoming operator
- Paperwork!
- Check out with site supervisor
- Sign out on the Site ICS 211
- Update your ICS 214

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NETWORK INFRASTRUCTURE IMPROVEMENTS

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Key Focus in 2015

- Backbone redundancy, prep for higher speed access
  - Each site to have at least two high-speed (n * 10 Mbps) links
  - Upgraded link between W2XSC and W4XSC (80 Mbps)
  - ½ competed new link between W2XSC and W1XSC
  - Still looking for new site in NW part of county for W3XSC

- Hardened backbone sites
  - Improved routing infrastructure
  - Improved UPS runtime in the event of a generator failure
    - Result: 6+ hours of battery runtime at Crystal Peak
    - Frazier Peak is next
  - Improved remote sensor infrastructure

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UPS Runtime Improvements (6+ hours!)

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Remote Monitoring Improvements

New Crystal Peak Cabinet

Side View

Net Control Review

2015 Year End Summary

Santa Clara County ARES®/RACES

Revised: 07-Dec-2015

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Relief Briefings

- All defined in the "Performance Standards and Best Practices"
  – Assignment, activation number
  – Served agency, person in charge, how recognized
  – Frequencies, tactical calls, locations, contact numbers
  – Who to contact regularly
  – Radio, power supply, antenna information
  – Nearest telephone: location and number, how to dial out
  – Location of toilet, water, food, first aid, and other supplies
  – Summary of previous operational period
  – Current status of: people, resources, incident
  – Pending issues for next operational period
  – Introduce replacement to rest of team

Local Net Transfer/Handing-off

- For local hand-off with single net control operator
  – Relief operator can work as scribe briefly, just prior to hand-off
- For local hand-off with net control & scribe team
  – Replacement arrives early, familiarizes self with location
  – Replacement receives briefing from shift supervisor
  – Net Control runs net solo while scribe briefs replacement with details
  – Scribe catches up on anything missed
  – Net Control announces shift change, stand by for 30 seconds
  – Scribe slides into net control seat; replacement slides into scribe seat
    • Replacement → Scribe → Net Control → Break
  – Announce that net is resumed

Remote Net Transfer/Hand-off

- You may need to transfer a net to a remote net control
  – Initial resource net control transfer to EOC or event location
  – Hand off to a more experienced net control operator
  – Evacuation of net control location
- Information to transfer
  – Current status of all who are checked into net
    • Resource Net transfer involves current en route status information
  – Any other instructions as may be necessary; see relief briefing list
- Key points
  – Priority One: Maximize accuracy; losing someone is not an option!
  – Priority Two: Minimize transfer time
  – Always use good communications techniques: 5 words at a time; proper pro-words; pause before speaking; eliminate need for repeats

---

Procedure for Transfer of Net

NC1 = Current Net Control   NC2 = Replacement Net Control

Who	What
NC2	Announces presence; ready for net control transfer
NC1	Acknowledge; announce start of H&W; requests NC2 to acknowledge each response with a tactical call such as "net2" (or similar)
NC1	Calls each person, one at a time, _phonetically_
Individuals	Respond as usual (for resource net: street location, odometer, call sign)
NC2	"acknowledged, net2" or "roger, net2"; or "say again …"
NC1	Acknowledges; repeats process for rest of people on net
NC1	Fills in NC2 on any other pending issues; asks if ready to take net
NC2	Acknowledges all info; confirms ready
NC1	Announces transfer of net
NC2	Announces self as net control

Exercise: Transfer of Level 3 Resource Net

- Need 5 volunteers
  - Net control 1
  - Net control 2
  - Scribe for net control 2 (optional)
  - Traveler 1
  - Traveler 2
- Before you start:
  - Net Control 1: write down traveler call signs
  - Travelers: make up a street location and odometer reading
- Follow the script …
  - "<…>" indicates where you substitute your actual information
  - Example: <NC2 call sign> means you say Net Control 2's call sign
  - Net Control 2: fill in ICS-309 as you go
  - Scribe for NCO2: fill in Travel Tracking Form as you go

Exercise: Transfer of Level 3 Resource Net

Who	What
NC2	Net control, this is <NC2 call sign>, ready for net control transfer
NC1	<NC2 call sign> roger; Break; I will now conduct a H&W check; when I call you, respond with street location, odometer and your call sign; <NC2 call sign> I want you to acknowledge each response as tactical call "net2"
NC2	Roger, net2
NC1	<traveler 1 call sign spelled phonetically>, health and welfare
Traveler 1	<Respond with your street location, odometer, call sign>
NC2	Roger, net2
NC1	Acknowledged. <traveler 2 call sign spelled phonetically>
Traveler 2	<Respond with street location, odometer, call sign>
NC2	Say again odometer
Traveler 2	<Respond with odometer>
NC2	Roger, net2
NC1	Health and welfare check complete

Continued on next page …

Exercise: Transfer of Level 3 Resource Net

Continued from previous page …

Who	What
NC1	Net2 did you need any other fills?
NC2	Negative
NC1	O.K. Additional information follows: You need to contact Jenny at 867-5309 to unlink the repeaters after you close the net.
NC2	Acknowledged.
NC1	Are you ready to take the net?
NC2	Affirmative.
NC1	This is <NC1 call sign> turning over net control to <NC2 call sign>; <NC1 call sign> clear.
NC2	This is <NC2 call sign>, net control for the Santa Clara County Resource Net. This is a directed net…

Performance Review

2015 Year End Summary

Santa Clara County ARES®/RACES

Revised: 10-Dec-2015

Note: Examples from actual nets and ICS forms will be used to illustrate areas that we all need to work on.

Thought you said you could handle constructive criticism...

©2009 Judy Nelson

On-Air Performance Review

2015 Year End Summary

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Instructions

- Listen to each recording
- Give a thumbs-up if it was properly done
- Give a thumbs-down if it could be improved
- Be ready to justify your opinion
- If it can be improved, how would you say it better?

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Resource Net

- Net Control Instructions
- Check-In
- Check-Out

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Tactical Net – Dealing with Tactical Call Signs

- Net Control ID
- Tactical Call Sign Check-in/Assignment
- Tactical Call Assignment Change
- In Position
- Check-Out

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Tactical Net – Gathering Information

- NCO pre-announce info request, format
- NCO instructions before gathering reports
- Info Reports
- Health & Welfare

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Tactical Net – Other Directed Net Activities

- NCO Instructions
- Directed Net
- Status Update
- Dead Air
- Temporarily Leave Net / Return
- Ask/Receive Info

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Shadow Net – Open Net

- Prowords
- Listen up!
- Status Reports
- Radio configuration
- Tactical Call conversation
- Noise!

Hospital Net – Directed Net

- Message Handling Order
- Message Passing
- Dealing with interference
- Radio configuration

Key Points

- Net control operators:
  - Define expected response format
  - Pre-announce upcoming information gathering, when possible
  - Give instructions that avoid doubles
- Net participants
  - Listen up and answer promptly when called
  - Answer in requested format -- no more, no less
  - When using tactical calls, call and answer using tactical call
- All
  - Attend training! Best performers had more training.
  - Know how to configure your radio; check configuration before using
  - Minimize the number of words (on-air time) used
  - Observe proper handling order at all times
  - Use proper prowords at all times
  - Be prepared for the environment: noise, heat, cold, rain, …
  - The last thing you say should be your FCC call sign

Forms Review

2015 Year End Summary

Santa Clara County ARES®/RACES

Revised: 05-Dec-2015

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
- <u>Neatness counts</u>

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

Exercise: ICS-214 Unit Log

- Create an ICS-214 log for the following scenario in City of Xanadu (XND)

  - Incident is "Tree Lighting", activation number: XND-15-TLE
  - You are assigned a Tactical Call of "Rover 1"
  - The Event IC is Herman Munster W6XRL4
  - The event is scheduled for 1600 to 2100 hours today
  - You leave home at 1515 hours, mileage 123
  - You arrive at the staging location at 1545 hours, mileage 133
  - The event starts at 1600
  - Lots of activities take place during your 5 hour shift such as: H&W, shift change, breaks, messages, etc. (we won't log these for this exercise to save time)
  - You are released at 2105 and check out of staging

  Your ICS-214 should be completed as you would submit it when checking out

Slide 49

Exercise: ICS-214 Unit Log

UNIT LOG ICS 214-SCCo ARES/RACES	1. Incident Name and Activation Number		2. Operational Period (Date/Time)	
	Xandu Tree Lighting *XND-15-TLE*		*12/12/2015* From: *1600*	*12/12/2015* To: *2100*
3. Unit Name / Tactical Call / Designators *Rover 1*		4. Unit Leader (Name, Call Sign, ICS Position) *Your Name, Your FCC Call Sign*		
5.	Personnel Roster Assigned			
	Name	Call Sign	ICS Position	Home Base/City

UNIT LOG ICS 214-SCCo ARES/RACES	1. Incident Name and Activati...		Operational Period (Date/Time)	
	Xandu Tree Lighting *XND-15-T...*		*1600*	*12/12/2015* To: *2100*
3. Unit Name / Tactical Call / Designators *Rover 1*		...e, Call Sign, ICS Position) *...ian Roster W6XRL4*		
5.	Per... Roster Ass...			
	Name		IC...tion	Home Base/City
Your Name		*Y...Sign*		

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Exercise: ICS-214 Unit Log

Instructions for completing the form:

Field #	Field Title	Instructions
4	Unit Leader	**For individuals:** Enter your name and call sign
		For teams: Enter the name, call sign and ICS position of the individual in charge of the unit.
5	Personnel Roster	**For individuals:** Leave blank
		For teams: List the name, call sign, ICS position and home base/city of each member assigned to the unit during the operation period.

Most forms have the instructions on the back

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Slide 51

Exercise: ICS-214 Unit Log

UNIT LOG ICS 214-SCCo ARES/RACES	1. Incident Name and Activation Number		2. Operational Period (Date/Time)	
	Xandu Tree Lighting *XND-15-TLE*		*12/12/2015* From: *1600*	*12/12/2015* To: *2100*
3. Unit Name / Tactical Call / Designators *Rover 1*		4. Unit Leader (Name, Call Sign, ICS Position) *Your Name, Your FCC 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)	
1515	*Left Home, OD 123*	
1545	*Arrived at staging, OD 133*	
1600	*Event starts*	
2105	*Released, checked out of Staging*	← **Activity Detail Here**

7. Prepared By (Name, Call Sign, ICS Position) *Your Name, Your FCC Call Sign*	8. Date & Time Prepared *12/12/2015 - 2105*	9. Page _1_ of _1_

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Slide 52

Slide 53

Good Detail

Slide 54

Detail Lacking

ICS 213 Message Form

- Message Numbers
- Header
- Address Info
- Message Body
- Action Taken
- Operator Use

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

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

Exercise: ICS-309 Communications Log

COMM Log ICS 309-SCCo ARES/RACES

1. Incident Name and Activation Number		2. Operational Period (Date/Time)	
Training Class Exercise XND-14-TCE		12/13/2014 From: 1100	12/13/2014 To: 1400
3. Radio Net Name (for NCOs) or Position/Tactical Call		4. Radio Operator (Name, Call Sign)	
Xanadu Tactical Net		Your name, your FCC call sign	

Time (24:00)	FROM Call Sign/ID	Msg #	TO Call Sign/ID	Msg #	Message
1145	----	---	----	---	Start Net
					Net Control = Your Name, <your call sign>
	----	---	----	---	Scribe = Herman Munster, W6XLR4
1155	Shelter 2	S2-013	EOC	XND-106	Bed count
1210	KJ6HAM				check-in – assigned tactical = Shelter 1
1220	KB6HAM				check-in – assigned tactical = Shelter 3
1250	EOC	XND-107	Shelter 3	S3-1004	Inventory checklist
1305	Shelter 1	S1-021	EOC	XND-108	Supply status
1310		XND-109	All Shelters		Exercise complete --- Confirmation #s follow
1311		"	Shelter 1	S1-022	
1312		"	Shelter 2	S2-014	
1313		"	Shelter 3	S3-1005	
1330	----	---	----	---	Net closed

NC Change Logged

Most Common Errors on Forms

ICS-214 Unit Log

Missing Detail

ICS-213 Message Form

ICS-309 Communications Log
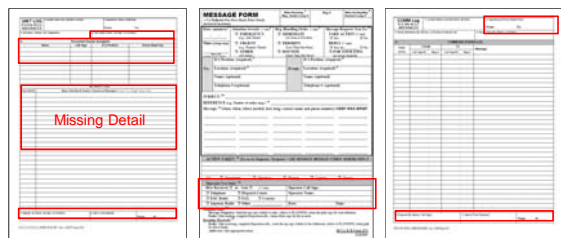
Legible hand writing

END FORMS REVIEW

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Mesh / Wi-Fi

2015 Year End Summary

Santa Clara County ARES®/RACES

Revised: 07-Dec-2015

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Mesh / Wi-Fi Review

- March 2015 – Mesh / Wi-Fi Workshop with 33 participants
- Discussed
  - IP Networking basics
  - Discussed hardware available to use
  - VOIP phones
  - Power over Ethernet (POE)
  - Frequencies
  - Part 15 vs Part 97 considerations
  - Hands-on exercises

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Mesh / Wi-Fi Review

- County Wide Drill - April
  - One aspect of the exercise provided hands-on use of a Mesh Network

- Milpitas BBQ Festival - May
  - 3 Ticket Booths with Mesh nodes, VOIP phones, and cameras
  - Command post with Asterisk PBX, VOIP Phones, video display

- Sunnyvale
  - Workshop: May and July - 8 plus nodes, VOIP phones, Asterisk PBX
  - Field Day: June - 4 nodes with cameras and VOIP phones
  - SNAP Graduation: October - 2 nodes with phones, voicemail, 1 camera
  - Joint workshop with Cupertino: August

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Mesh / Wi-Fi Review

- Cupertino SCC Sheriff's Heroes 5K Run - November
  - 6 locations
  - Mesh nodes, VOIP phones, cameras, Asterisk PBX

- A Mesh / Wi-Fi workshop is scheduled for June 2016

  Additional information: www.scc-ares-races.org/mesh/

  SCC Mesh User Group: groups.yahoo.com/group/scc-mesh

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END MESH/WI-FI REVIEW

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Training Plans 2016

2015 Year End Summary

Santa Clara County ARES®/RACES

Revised: 06-Dec-2015

Training Plans For 2016

- Intro and Fundamentals Class offered 3 times each year
  - Maintain reasonable class size
  - Location – 2 in Mtn. View and 1 in Sunnyvale
- Field Ops reduced to one class rather than two
  - Fundamentals Class is now a prerequisite
  - Much of the material from Fundamentals was duplicated in this class
- Planning class to be rewritten
  - More realistic examples and exercises
- Discussion about a Leadership Course/Workshop for ECs/AECs
  - Your ideas welcome

END TRAINING UPDATES

Thank You!

We look forward to seeing you again next year:

Classes, drills, events, …