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Message Passing



Santa Clara County ARES®/RACES
Revised: 18-June-2024

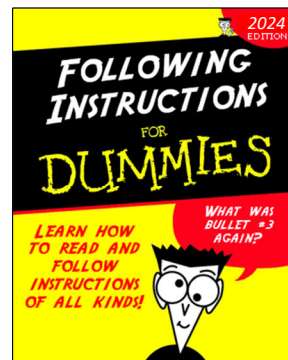
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Housekeeping

- Introductions
- Pen/pencil & paper
- Cell phones on mute
- Side conversations
- Questions
- Breaks
- Restrooms
- Do not wander within building
- In case of emergency



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Agenda

- Being a Great Message Handler/Shared Procedure
- Practice (prowords, message passing techniques)
- Message Types
 - Operator-to-operator vs. 3rd party (spoken and written)
- Radio Routing Information
- Common Procedures
 - Announcing, Sending, Logging
- Form-specific Exercises
- Relaying Messages
- Problem Solving
- Exercises throughout ...



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Learning Objectives

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

- Properly send, receive and log 3rd party written messages, including messages using formats that you haven't seen before

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Fictitious Call Signs

Examples used in this class make use of fictitious call signs:

- W6XRL4: Herman Munster
 - Character in a 1960 TV show
 - We will treat it like a real FCC call sign, even though it doesn't have the correct format
- XNDEOC: City of Xanadu Emergency Operations Center (EOC)
 - We will treat it like a real tactical call sign



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What does it take to be a great Message Handler?

- You need to be a great communicator,
 - com-mu-ni-cate: to transmit information, thought, or feeling so that it is satisfactorily received and understood
- For 3rd party messages, we don't decide what is "satisfactory"
- We need to deliver the message precisely
 - pre-cise-ly: 1. in a precise manner 2. exactly
- How is that possible?
 - Following shared, standard, procedures that EVERYONE is trained to use!

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Shared Procedures

- If everyone uses the same shared procedures things run efficiently and accurately.
- If people use different procedures things are slowed down, we become less efficient, and errors occur.
- We use shared procedures that everyone utilizes every time.

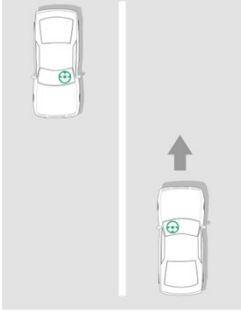
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Which is Correct?

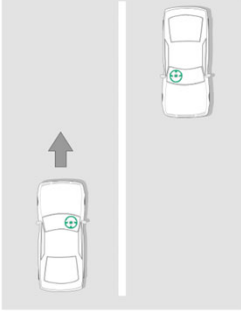
RIGHT-HAND TRAFFIC

- ★ CARS DRIVE ON **RIGHT**-SIDE OF ROAD
- ★ STEERING WHEEL ON **LEFT**-SIDE OF CAR



LEFT-HAND TRAFFIC

- ★ CARS DRIVE ON **LEFT**-SIDE OF ROAD
- ★ STEERING WHEEL ON **RIGHT**-SIDE OF CAR



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HOMEWORK

- Print and read [SCCo ARES/RACES Message Handling Procedures](#) (PDF) [updated 06/28/2024]
- Learn the prowords and techniques. Practice until you know them well. It's not hard but it does take time and must be done before class.
- We will not be teaching what is in that document, just reviewing it during class.
- We will have a practice session using material from this document during class.

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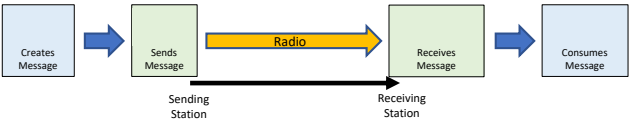
Take every opportunity to practice at Drills, Public Service Events, Weekly Nets, and the Quarterly Training Net.



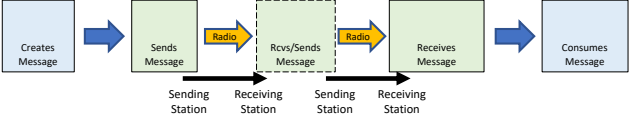
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Message Handling Roles - Graphical

DIRECT



RELAY



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Message Types

Operator-to-Operator vs. 3rd Party

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Operator-to-Operator Messages

- Sent by and to other amateur radio operators
 - Message Author is the Origin Station
 - Destination Station is the Message Recipient
- Examples:
 - Check-In/Out, Health & Welfare, Status Updates, Damage Assessments
- Note: The info may be summarized and sent to a 3rd party
 - Crowd counts totaled and sent to event organizer
 - Mike-Mike report summaries delivered to EOC staff.
- But radio operators define their own format and content
- Always use proper prowords, prioritization
- Log all Operator-to-Operator messages on an ICS-309

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3rd Party Messages

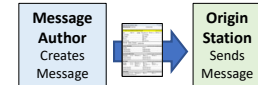
- 3rd Party messages are handled by amateur radio operators on behalf of our served agencies
- 3rd Party Message
 - Format is usually some type of form used by that agency
 - Content may include unfamiliar terms
 - To and From is typically an ICS position and location
 - Handling order is how quickly they need it sent
- Key: Radio operators must conform to 3rd party workflow
- Always use proper prowords, prioritization
- Also follow a common set of procedures

The ability to handle 3rd party traffic is a key difference between a Type IV and a Type III Credential.

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3rd Party Written Messages



- 3rd Party written messages always use an appropriate form
 - General messages on ICS-213; resource requests on EOC-213RR; etc.
- If the message is not on the appropriate form:
 - Best: Ask the author to use the correct form
 - If they don't have one, provide it to them
 - Else: Transcribe the message to the form, asking the author to clarify as you go
 - Clarify spelling, other details
 - Last Resort: Staple to an appropriate form only if necessary
 - Papers can become detached, separated
 - Staples, paper clips, and odd paper sizes can cause problems when scanning/copying
 - Add Message Number and Form Type on top right of attached paper
- Log all 3rd Party written messages on an ICS-309 Comm Log

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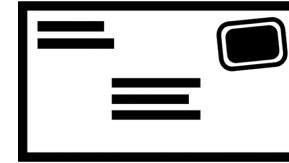
3rd Party Spoken Messages



- For simple messages, handle as spoken
 - Example: Most messages between shadows are simple, spoken messages
 - “Ask Steven to call Jenny at 867-5309”
- Use your judgement
 - IF message is longer or more complicated
 - Such as: a complicated message that needs to be delivered exactly
 - OR if it needs routing information for delivery outside the radio room
 - Such as: a message to be delivered to an ICS position in an EOC
 - OR if the message should be tracked
 - Such as: the 3rd parties may need to refer to it again
 - THEN write it down on the appropriate form; handle as a written message
- Log all 3rd party spoken messages on an ICS-309 Comm Log
 - (Shadows can log on their ICS-214)

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Radio Routing Information

The “Envelope” for 3rd Party Messages

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Envelope Information



- “Envelope” information is needed for all 3rd party comms
 - Postal carriers: envelope
 - Package carriers: waybill
 - Fax machines: cover sheet
- Information needed
 - Who and where it’s going to
 - Who and where it came from
 - How fast it should be sent
 - Tracking info
- The same is true for messages sent via radio

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Message Numbers

- Generally assigned by the served agency
- Format is XXX-NNN
 - where XXX is the agency code or assigned identifier
 - where NNN is a sequential number
- Examples:
 - XND-123 Xanadu EOC
 - SH5-904 Shelter 5
 - CP2-586 Checkpoint 2
- For today’s exercises use your initials and a sequential number, i.e., ABC-100, ABC-101, ABC-102, ...

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What Routing Info Should be Entered?

- The author of a 3rd party message may not know the proper Handling Order or TO address
 - They usually enter their data into an online system (WebEOC)
 - The “system” handles it from there
 - Not sure which “ICS Position” should get the message (varies by form)
- They may not know how quickly it should be sent (Handling Order)
- Radio operators may not know either

² Date:	³ Time (24hr):	⁴ Handling: <input type="radio"/> Immediate (ASAP) <input type="radio"/> Priority (<1 hr) <input type="radio"/> Routine (<2 hr)
⁵ ICS Position:	⁹ ICS Position:	
⁶ Location:	¹⁰ Location:	
⁷ Name:	¹¹ Name:	
⁸ Contact Info:	¹² Contact Info:	

Recommended Form Routing Sheet

- Covers all standard forms
 - General EOC, Hospital, Allied Health, RACES
- Side 1 is for General Forms
- Side 2 is for Medical/Hospital Forms and RACES Mutual Aid
- As recommended by agencies
- Radio operator can coach
 - Have an extra copy to share
- Message author decides
 - Faster/slower handling
 - To different location/position
 - We only recommend if the message author does not know the information

SCCo ARES/RACES Recommended Form Routing

Usage:

- This sheet serves as a guide for recommended routing. To Location and ICS Position are optional fields for all messages.
- The message author can select whether Handling Order, Location and ICS Position are chosen for each message.
- Handling Order is optional. It is recommended to use Handling Order for all messages.
- Location is optional. It is recommended to use Location for all messages.
- ICS Position is optional. It is recommended to use ICS Position for all messages.
- Handling Order, Location and ICS Position are optional. It is recommended to use Handling Order, Location and ICS Position for all messages.

Form Type	Handling	To Location **	To ICS Position **
General EOC			
ICS-213 Message Form	Author defined	Author defined	Author defined
EOC-213RR Resource Request	If "Priority" (Field 11) is: Then "Handling" is: Now (0-4 hrs) Immediate (ASAP) High (0-4 hrs) Immediate (ASAP) Medium (8-12 hrs) Priority (<1 hr) Low (12+ hrs) Routine (<2 hrs)	County EOC	Planning Section
OA Jurisdiction Status	Immediate (ASAP)	County EOC	Situation Analysis Unit Else: Planning Section
OA Shelter Status	Priority (<1 hr)	For city-managed: City EOC For county-managed: County EOC	Mass Care and Shelter Unit Else: Care and Shelter Branch Else: Operations Section

** For actual EOC activations, use the default To Location and To ICS Position (as indicated, unless told otherwise by the message author). For an ARES/RACES exercise or training event, use the information given for that event, e.g. "Practice EOC" may be used instead of "County EOC".

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Recommended Form Routing Sheet - Pg 1

- Handling may be conditional upon other fields
- To Location may be conditional upon activation status
- ICS Section > Branch > Unit > are identified to cover different staffing levels

213RR

11. Priority

Now

High (0-4 hours)

Medium (5-12 hours)

Low (12+ hours)

Form Type	Handling	To Location **	To ICS Position **
General EOC			
ICS-213 Message Form	Author defined	Author defined	Author defined
EOC-213RR Resource Request	If "Priority" (Field 11) is: Then "Handling" is: Now (0-4 hrs) Immediate (ASAP) High (0-4 hrs) Immediate (ASAP) Medium (8-12 hrs) Priority (<1 hr) Low (12+ hrs) Routine (<2 hrs)	County EOC	Planning Section
OA Jurisdiction Status	Immediate (ASAP)	County EOC	Situation Analysis Unit Else: Planning Section
OA Shelter Status	Priority (<1 hr)	For city-managed: City EOC For county-managed: County EOC	Mass Care and Shelter Unit Else: Care and Shelter Branch Else: Operations Section

Recommended Form Routing Sheet - Pg 2

- Handling varies based on form type
- To Location may be conditional upon activation status
- To Position can vary based on location

Form Type	Handling	To Location **	To ICS Position **
Medical			
HAVBed Report	Immediate (ASAP)	If open: PHDOC Else: County EOC	EMS Unit Else: Medical Health Branch Else: Operations Section
Medical Facility Report	Immediate (ASAP)	If open: PHDOC Else: County EOC	EMS Unit Else: Medical Health Branch Else: Operations Section
Medical Resource Request Obsolete Replaced by EOC-213RR			PHDOC: Health Care Liaison
Allied Health Facility Status	Routine (<2 hrs)	If open: PHDOC Else: County EOC	County EOC: EMS Unit -or- Public Health Unit Else: Medical Health Branch Else: Operations Section
RACES			
RACES Mutual Aid Request	Routine (<2 hrs)	County EOC	RACES Chief Radio Officer Else: RACES Unit Else: Operations Section

Exercise: Radio Routing Information

- What are the fields needed for radio routing?
- Which of the following forms contain all necessary radio routing information?

Form Type	Radio Routing Info?
ICS-213 Message Form	
EOC-213RR Resource Request	
OA Jurisdiction Status	
OA Shelter Status	
Allied Health Facility Status	

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Exercise: Radio Routing Information

213RR Resource Request

- Recommend:
 - Handling Order
 - To Location
 - To Position

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Exercise: Radio Routing Information

Jurisdiction Status

- Recommend:
 - Handling Order
 - To Location
 - To Position

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Exercise: Radio Routing Information

Shelter Status

- Info: The Shelter is run by the county
- Recommend:
 - Handling Order
 - To Location
 - To Position

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Exercise: Radio Routing Information

Allied Health Status

- Info: The Public Health Dept. Operations Center (PHDOC) is **not** activated
- Recommend:
 - Handling Order
 - To Location
 - To Position

Exercise: Radio Routing Information

RACES Mutual Aid Request

- Recommend:
 - Handling Order
 - To Location
 - To Position



Common 3rd Party Procedures

Applies to any 3rd party messages

Message Announcement Procedure

- Step 1: Announce quantity and handling order; wait for “go”
 - Examples
 - “Net Control, I have 2 Priority messages for you”
 - “Net Control, I have 1 Immediate and 1 Routine message for you”
 - The receiving station will prioritize vs. other messages that may be waiting. When ready, they will say: “go ahead” or “ready to copy”
- Step 2: Announce message type before sending; wait for “go”
 - Let the receiver know what’s coming so they can prepare the right form (and routing slip, if needed)
 - “Message type is ICS-213”
 - “Message type is 213RR with Routing Slip”
 - “Message type is informal” (ex. unstructured, non-form-type messages)
 - The receiving station readies the right form (and routing slip, if needed), then says: “go ahead” or “ready to copy”
- Step 3: Send the message

Message Sending Procedure

No Routing Slip Needed	Routing Slip Needed
"Message Number" ... (on form)	"Message Number" ... (on routing slip and form)
Other header fields (on form) <ul style="list-style-type: none"> Date, Time, Handling, etc. (varies by form) To (position, location, ...) From (position, location, ...) 	Other header fields (on routing slip) <ul style="list-style-type: none"> Date, Time, Handling To (position, location, ...) From (position, location, ...)
• Subject, Report Type, etc. (varies by form)	• Form Type, Topic (on routing slip)
	"Form Contents" (receiver moves to the form)
Form fields <ul style="list-style-type: none"> Say section names (if applicable) at start of each section Say field name (or number), then field value Keep to 5 groups/fields at a time 	Form fields <ul style="list-style-type: none"> Say section names (if applicable) at start of section Say field name (or number), then value Keep to 5 groups/fields at a time
"End of Message"	"End of Message"
Capture receiving station's message number	Capture receiving station's message number
Log the message	Log the message

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Multi-Recipient Sending Procedure

- Announce quantity and priority of message for ...
 - "All stations, all stations, stand by for one priority message"
 - "All shelters, all shelters, stand by for one routine message"
- [Optional] Poll for readiness of all stations
 - Depends on experience/discipline/professionalism of other operators, previous activity on the net, urgency of message, ...
- Pick a pacing station and confirm with them
 - "<city/agency name>, will you be my pacing station?"
- Send message to pacing station as usual, all other stations copy message
 - Get message number from pacing station
- Poll other stations for their message number
 - "I will now poll all stations for fills and message numbers"
 - Other stations ask for fills (if needed), then provide their message number
- Usually, put stations that missed most/all of the message at the end; don't make everyone else wait!

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Logging Messages

- Log all communications traffic on ICS-309 Comm Log
- Include
 - Time message was handled
 - 24-hour local time, as usual
 - "From" and "To" call signs and message numbers
 - Optional: leave your call sign slot empty
 - A summary of the message
 - Form Type: Main Topic/Subject (should match Routing Slip if used)

5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1935	XNDP5	CP5-123	XNDEOC	XND-511	ICS213: Active Flooding

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Logging Multi-Station Messages

Sending Station:

- Use a separate line for each acknowledgment
 - But the multiple lines essentially constitute one long entry
- Either repeat the From message number, use ditto marks, an arrow, or something else to clearly indicate that all entries are part of the same message

5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1310	XNDEOC	XND-100	All Shelters		ICS-213: Report supply levels by 1500
1311		"	XNDSH1	SH1-123	
1312		"	XNDSH2	SH2-210	
1313		"	XNDSH3	SH3-344	

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Logging Multi-recipient Messages

Receiving Station:

- Indicate the “multi-recipient” nature of the message by logging an appropriate “TO” value.
- Referring to the previous example of the “sender” log, here’s what the “Shelter 2” (receiving station) log might look like:

5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1312	NC	XND-100	All Shelters	SH2-210	ICS-213: Report supply levels by 1500

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Form-specific Exercises

Proper prowords and procedures works for any form

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Form-specific Exercises

- You will need
 - 3rd party forms: 3-ICS-213, 1-EOC-213RR, 1-OA Jurisdiction Status, 1-OA Shelter Status, 1-Allied Health Facility Status, Form 1
 - 3-Radio Routing Slips
 - 1-ICS-309 Communications Log
 - 1-Recommended Form Routing Cheat Sheet
- Process
 - You will be the receiving station
 - You need to copy the message and log it on an ICS-309 (correctly)
 - Observe common behaviors; look for patterns
 - We will compare results after each message

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ICS-213

- Usage
 - General messages
- Recommended field groupings
 - Origin Message Nbr, Date, Time, Handling, Msg Request
 - To, From
 - Subject
 - Reference (if used)
 - Message - 5 groups at a time
 - End of Message after last group
- Not sent over the air
 - Action Taken
 - Local Msg. Author/Receipt Use Only
- Radio operator fills out bottom
- Take out an ICS-213 Form

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Message Passing - Tabletop

Exercise: ICS-213 #1 (Single station)

MESSAGE FORM

Origin Msg # XND-201 Destination Msg #

Handling: Immediate CASAP Priority (1 Hr) Routine (2 Hr)

DATE: 10/08/2024 TIME: 1008

IC'S Position: Shelter Manager

Location: Shelter One

NAME: Kamehu EOC

Telephone #: H. Munster

SUBJECT: Supply Order

MESSAGE: Send order for next 3 days of supplies by 2300.

Time (24:00)	FROM	TO	Message
HHMM	EOC Msg #	Call Sign/ID Msg #	
	XND-201	Shelter 1 <Dest. #>	ICS-213: Supply Order

Operator Use Only:

Radio: In-use Standby

Mode: Push-to-Talk Dispatch Center

IC's Position: Shelter Manager

Location: Shelter One

NAME: Kamehu EOC

Telephone #: H. Munster

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At receiving station: Shelter 1

Did you fill this out?

Exercise: ICS-213 #2 (Multi-station/receive)

MESSAGE FORM

Origin Msg # XND-202 Destination Msg #

Handling: Immediate CASAP Priority (1 Hr) Routine (2 Hr)

DATE: 10/08/2024 TIME: 1008

IC'S Position: Shelter Manager

Location: All Shelters

NAME: Kamehu EOC

Telephone #: H. Munster

SUBJECT: Meal Delivery

MESSAGE: Tonight's meal delivery will be delayed by 4 hours to 2130. Truck broke down and we are waiting the replacement.

Time (24:00)	FROM	TO	Message
HHMM	EOC Msg #	Call Sign/ID Msg #	
	XND-202	All Shelters <Dest. #>	ICS-213: Meal Delivery

Operator Use Only:

Radio: In-use Standby

Mode: Push-to-Talk Dispatch Center

IC's Position: Shelter Manager

Location: All Shelters

NAME: Kamehu EOC

Telephone #: H. Munster

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At receiving station: Shelter #

Did you fill this out?

Exercise: ICS-213 #2 (Multi-station/Send)

MESSAGE FORM

Origin Msg # XND-202 Destination Msg # See 309

Handling: Immediate CASAP Priority (1 Hr) Routine (2 Hr)

DATE: 10/08/2024 TIME: 1008

IC'S Position: Shelter Manager

Location: All Shelters

NAME: Kamehu EOC

Telephone #: H. Munster

SUBJECT: Meal Delivery

MESSAGE: Tonight's meal delivery will be delayed by 4 hours to 2130. Truck broke down and we are waiting the replacement.

Time (24:00)	FROM	TO	Message
HHMM	EOC Msg #	Call Sign/ID Msg #	
1120	XND-202	All Shelters	ICS-213: Meal Delivery
1120	"	Shelter 1	SH1-###
1120	"	Shelter 2	SH2-###
1121	"	Shelter 3	SH3-###

Operator Use Only:

Radio: In-use Standby

Mode: Push-to-Talk Dispatch Center

IC's Position: Shelter Manager

Location: All Shelters

NAME: Kamehu EOC

Telephone #: H. Munster

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At sending station: Xanadu EOC

OA Jurisdiction Status

- Usage
 - Report jurisdiction status when WebEOC is not available
- Update vs. Complete
 - If Complete, all underlined fields are required
- Recommended field groupings
 - Msg Nbr, Date, Time, Handling
 - To, From
 - Report Type, Jurisdiction Name
 - Say section name
 - Say field name(s) and value(s)
 - Shoot for about 5 items (fields/groups) at a time
 - Skip empty fields & sections

Santa Clara OA Jurisdiction Status

Radio Operator Only: Origin Msg # Destination Msg #

IC'S Position: Shelter Manager

Location: All Shelters

NAME: Kamehu EOC

Telephone #: H. Munster

SUBJECT: Meal Delivery

MESSAGE: Tonight's meal delivery will be delayed by 4 hours to 2130. Truck broke down and we are waiting the replacement.

Operator Use Only:

Radio: In-use Standby

Mode: Push-to-Talk Dispatch Center

IC's Position: Shelter Manager

Location: All Shelters

NAME: Kamehu EOC

Telephone #: H. Munster

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Exercise: OA Jurisdiction Status (City > County)

At receiving station: County EOC

Radio Operator Only: Relay: Recd: Sent:
Name: <Your Name> Call Sign: <Your Call> Date: <today> Time (24hr): 11:13

Time (24:00)	FROM	TO	Message
HHMM	Call Sign/ID	Msg #	Call Sign/ID
	Xanadu	XND-203	OA EOC
			Msg # <Dest. #>
			JurisStat: Xanadu City

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OA Shelter Status

- Usage
 - Report shelter status when WebEOC is not available
- Report Type:
 - Update vs. Complete
 - If Complete, all underlined fields are required
- Recommended field groupings
 - Msg Nbr, Date, Time, Handing
 - To, From
 - Report Type, Shelter Name
 - Say section name
 - Say field name(s) and value(s)
 - Shoot for about 5 items (fields/groups) at a time
 - Skip empty fields & sections

Radio Operator Only: Relay: Recd: Sent:
Name: <Your Name> Call Sign: <Your Call> Date: <today> Time (24hr): 11:13

Time (24:00)	FROM	TO	Message
HHMM	Call Sign/ID	Msg #	Call Sign/ID
	Xanadu	XND-203	OA EOC
			Msg # <Dest. #>
			JurisStat: Xanadu City

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Exercise: OA Shelter Status (Shelter > City EOC)

At receiving station: Xanadu EOC

Radio Operator Only: Relay: Recd: Sent:
Name: <Your Name> Call Sign: <Your Call> Date: <today> Time (24hr): 11:13

Comments: Last client has departed, we are closed.

Time (24:00)	FROM	TO	Message
HHMM	Call Sign/ID	Msg #	Call Sign/ID
	Hope Shelter	HSS-204	XNDEOC
			Msg # <Your #>
			Shelter Stat: Hope Street

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Report Type: Update or Complete

Used On: OA Jurisdiction Status
OA Shelter Status
Allied Health Status (Used on Packet Version Only)

Report Type: Update Complete
Important: See Instructions!

Report Type	Required
Update	<ul style="list-style-type: none"> Update: Normal mode. Recipient should only replace fields in WebEOC that are entered here. Other fields should retain their current values. To tell the recipient to clear a text field in WebEOC, write "[CLEAR]" in the field. To append to existing data in a WebEOC text field, write "[APPEND]", followed by the text to be appended. Complete: Use with caution. An empty field here tells the recipient to clear the field in WebEOC. Use this to replace all fields in WebEOC with the data provided here, or to report on current status of all WebEOC fields.

UPDATE {CLEAR} clears the field of all data that is in WebEOC
{APPEND} appends the new data to what is already in WebEOC

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Radio Routing Slip

- Usage
 - When form being sent does not have all radio routing information fields
 - Also write Origin Msg Nbr in upper-right corner of associated form
- Recommended field groupings
 - Message Nbr, Date, Time, Handling
 - To, From
 - Form Type, Topic
- Then say, "Form Contents" and continue by sending the associated form

EOC-213RR Resource Request

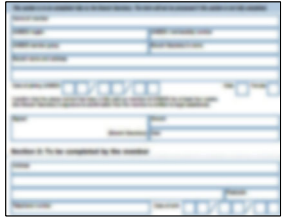
- Usage
 - Non-mutual aid resource requests
 - i.e. barricades, water, sand, ...
 - Use with Radio Routing Slip
- Recommended field groupings
 - Incident Name, Date, Time
 - Then, use judgement
 - Say field number(s) and value(s)
 - Shoot for about 5 items (fields/groups) at a time
 - Skip empty fields
- Signature Line
 - If signed, send "with signature" as part of the Field 7 data.

Exercise: EOC-213RR (City > County)

At receiving station:
County EOC

Allied Health Facility Status

- Usage
 - Report allied health facility status
 - Use with Radio Routing Slip
- Recommended field groupings
 - Facility Name, Type, Date, Time
 - Contact Name, Phone, Fax
 - Other, Incident Name & Date
 - Then go section by section
 - Say section name
 - Say field name(s) and value(s)
 - Shoot for about 5 items (fields/groups) at a time
 - Skip empty fields & sections



Unfamiliar Forms

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Unfamiliar Form – what do you do?

- First, check if the receiving party has a copy of the form
 - If they do, it simplifies your sending process
 - Send them a copy/photo via fax or email or packet if possible?
- If they do ...
 - Send it as usual: top to bottom, left to right, section at a time, field name (or field number) and value
 - Skip empty sections/fields
 - Shoot for 5 items (fields/groups) at a time
- But what if they don't have the form?
 - Come up with a process!

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Unfamiliar Form – What Do You Do?

1. Define a process that works for you
2. Follow the process

Example: A Donut Ordering form

- How does the recipient know what you're saying is the name of a field, or data you are transmitting?
- Set the expectation: "I will say the word 'Field' followed by the field name, then the word 'Value' followed by the data in the field"
- If a form will be used more than once, assign field numbers and pass the form layout, first: "I will say 'Field' followed by the number, then 'Name' followed by the name."
- Subsequently, use the field numbers: "I'll send the message as 'field', followed by the number, pause, then say the field value"
- Use common procedures: 5 items (fields/groups) at a time, ...

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Example of an unfamiliar form: Donut Ordering Form

Date:	06-25-22
Time:	1430 hours
Person Ordering:	Herman
Glazed:	1 dozen
Jelly:	1 Raspberry
Plain:	24 mixed
Bear Claws:	de-clawed

What's missing?

Radio routing information!

Use a Radio Routing Slip!

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Example of Form with Numbered Fields

Building Status Report Form
Facilities Department Form 23

1. Facility Name: _____ 2. Date: _____ 3. Time: _____
4. Contact Name: _____ 5. Phone: _____ 6. Fax: _____
7. Other Phone, Fax, Cell Phone, Radio: _____

Building Operational Status	Check One	Personnel Status	Total
8. Not Functional		24. Upper-level Managers	
9. Partially Functional		25. Mid-level Managers	
10. Fully Functional		26. Administrative Assistants	
Damage Assessment		27. Facilities Engineers	
11. Structural Damage	Yes No	28. IT Engineers	
12. Partial Collapse		29. Safety Engineers	
13. Total Collapse		30. Medical Personnel	
14. Loss of Natural Gas		31. Builders	
15. Loss of Electricity		32. Bakers	
16. Loss of Water and/or Sewer		33. Candlestick Makers	
17. Loss of Telephones		34. Other	
18. Evacuating Building		35. Cafeteria	
19. Evac. Transportation Needed		36. Restrooms	
Equipment/Services		37. Computer Room	
Employees & Visitor Status		38. Auditorium	
20. Uninjured		39. Parking Structure	
21. Injured, but ambulatory		40. Air Conditioning	
22. Injured, needs assistance		41. Children	
23. Other		42. Laboratory	

Building Status Report Form
Facilities Department Form 23
Revised 02/2019

What's missing?
Radio routing information!
Use a Radio Routing Slip!

Exercise: Unknown Form At receiving station: Xanadu EOC

Santa Clara County RACES - Radio Routing Slip
Radio Operator Only | Origin-Msg #: WCP-207

This section to be completed by Message Author/Creator

Date: <today>	Time: 11:45	Routing: _____	Orientation: (000)	Priority: (1-10)	Route: (1-10)
Location: XND EOC	IC: _____	IC Position: IC	IC Name: _____	IC Contact Info: _____	IC Topic: _____
Form: _____	Type: Donut Order	Topic: Morning Order			

Instructions for Message Author/Creator:
1. Complete section above, surrounded by BOLD line (see instructions on back)
2. Fill in all required fields
3. Attach to the front of a form to be sent via radio
4. Deliver to radio operator for transmission

Radio Operator Only:
Name: _____ Send: _____
Phone: _____ Call Sign: _____ Date: _____ Time: (24:00)

Time (24:00)	FROM	TO	Message
HHMM	Call Sign/ID	Msg #	Call Sign/ID
	West CP	WCP-207	XNDEOC
			<Dest. #>
			Morning Donut Order

SCCA ARES/RACES Radio Routing Slip | Page 3 of 3

- Morning Donut Order**
- Date: <today>
 - Time: 11:35
 - Department: RACES
 - Glazed: 6
 - Jelly: 2
 - Assorted: 1 dozen



Relaying Messages

The Need for Relaying Messages

- We usually send messages directly (one hop)
 - We use the To and From Locations without thinking
 - Origin Station calls Destination Station listed in "To Location"
 - Destination Station sends back confirmation (Destination Msg Nbr) to the Origin Station ("From Location") during the same conversation
- But sometimes the Origin Station can't reach the Destination Station directly
 - No repeater (down or limited coverage)
 - Simplex distance or terrain issues

Relaying Messages

- We can use one or more “Relay Stations” when the Origin Station is unable to talk to the Destination Station directly
 - Origin station needs to find a path (one or more Relay Stations) to the “To Location” for sending the message
 - Destination station needs to find a path (one or more Relay Stations) to the “From Location” for sending their message number (confirmation)
 - This may be the same path used to send the message
 - It might be a different path (if one or more Relay Stations are now gone)
 - Finding the path may occur on the same or different net
 - Example: Command Net might be used to keep Message Net moving

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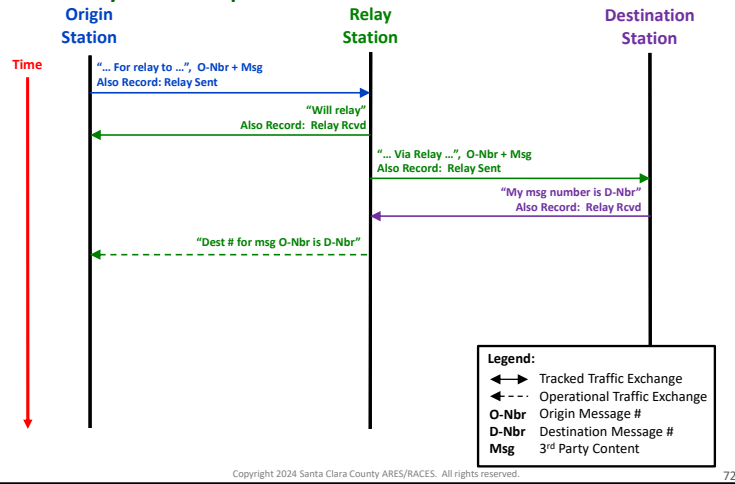
Relaying Messages

- Assumptions:
 - Stations know when a relay is required and arrange a path
 - When the message is being passed, stations know the “next hop” needed to reach the Destination Station
 - When the receipt is being returned, stations know the “next hop” needed to reach the Origin Station
 - The path taken by the receipt may be different than the original message.
 - Return receipt is sent as normal, operator-to-operator traffic with “Routine” handling.
 - Return of the receipt is done on a “best effort” basis.

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Relay – 2 Hops



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Message Hop 1

Origin Station To Relay Station

- Indicate relay request during handshake
 - “Message type is Shelter Status for relay to <destination>”
- Transfer message as usual
- Relay acknowledges message with “Will relay”
 - Instead of “My message number is...”
- “Radio Operator Only” section:
 - Origin Station records Relay Station’s call sign in “Relay: Sent”
 - Relay Station records Origin Station’s call sign in “Relay: Rcvd”
 - Remainder completed as normal
- Both log the traffic on their ICS-309

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Relay Example: Message Hop 1

Origin

Form: Radio Operator Only: ¹ Origin Msg #: *XND-321* Destination Msg #:

Radio Operator Only:

Relay: Rcvd: Sent: *Fire 4*

ICS-309:

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1100	EOC	XND-321	Fire 4		ICS-213: Water / Relay to Shelter 1

Relay

Form: Radio Operator Only: ¹ Origin Msg #: *XND-321* Destination Msg #:

Radio Operator Only:

Relay: Rcvd: *EOC* Sent:

ICS-309:

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1100	EOC	XND-321	Fire 4		ICS-213: Water / Relay from EOC

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Message Hop 2: Relay Station To Destination Station

- Transfer message as usual
 - Relay Station uses same paperwork that was created in previous hop
- “Radio Operator Only” section:
 - Relay Station records Dest Station’s call sign in “Relay: Sent”
 - Dest Station records Relay Station’s call sign in “Relay: Rcvd”
 - Remainder completed as normal
- Both log the traffic on their ICS-309
- Relay station should update previous log entry
 - Add Destination Msg Nbr to 1st hop message

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Relay Example: Message Hop 2

Relay

Form: Radio Operator Only: ¹ Origin Msg #: *XND-321* Destination Msg #: *S01-104*

Radio Operator Only:

Relay: Rcvd: *EOC* Sent: *Shelter 1*

ICS-309:

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1100	EOC	XND-321	Fire 4	S01-104	ICS-213: Water / Relay from EOC
1100	Fire 4	XND-321	Shelter 1	S01-104	ICS-213: Water / Relay to Shelter 1

Destination

Form: Radio Operator Only: ¹ Origin Msg #: *XND-321* Destination Msg #: *S01-104*

Radio Operator Only:

Relay: Rcvd: *Fire 4* Sent:

ICS-309:

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1100	Fire 4	XND-321	Shelter 1	S01-104	ICS-213: Water / Relay From EOC

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Receipt Hop 1: Relay To Origin Station

- Relay Station contacts Origin Station with operator-to-operator traffic
 - “<Origin Station>, this is <Relay Station> with a destination message number”
 - “Go ahead”
- Relay Station passes the message number
 - “For your Origin Msg Nbr XND-321, Dest MSg Nbr is: S01-104”
 - “Copy”
- Both log the traffic on their ICS-309
- Origin Station should update previous log entries
 - Add Destination Message Number to:
 - The original, outgoing message form
 - The original ICS-309 log entry

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Relay Example: Receipt Hop 1

Relay

Form: Radio Operator Only: ¹ Origin Msg #: *XND-321* Destination Msg #: *S01-104*

Radio Operator Only:

Relay: Rcvd: *EOC* Sent: *Shelter 1*

ICS-309:

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1100	<i>EOC</i>	<i>XND-321</i>	<i>Fire 4</i>	<i>S01-104</i>	<i>ICS-213: Water / Relay from EOC</i>
1100	<i>Fire 4</i>	<i>XND-321</i>	<i>Shelter 1</i>	<i>S01-104</i>	<i>ICS-213: Water / Relay to Shelter 1</i>
1100	<i>Fire 4</i>		<i>EOC</i>		<i>Origin # XND-321 = Dest # S01-104</i>

Origin

Form: Radio Operator Only: ¹ Origin Msg #: *XND-321* Destination Msg #: *S01-204*

Radio Operator Only:

Relay: Rcvd: Sent: *Fire 4*

ICS-309:

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1100	<i>EOC</i>	<i>XND-321</i>	<i>Fire 4</i>	<i>S01-104</i>	<i>ICS-213: Water / Relay to Shelter 1</i>
1100	<i>Fire 4</i>		<i>EOC</i>		<i>Orig # XND-321 = Dest # S01-104</i>

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More Complex Relay Situations

- Time Lag
 - It may be 30 minutes to an hour before you get the destination message number back; longer with two relays
- Two relays
 - The same procedure is easily extended to more than one relay
 - This would be extremely rare in our county, much less for a city
 - See Appendix at the end for a diagram
- Different path for return of Destination Message Nbr
 - By the time the Destination Message Number is on its way back to the Origin Station, one or more of the relays may be gone
 - So the “receipt” may take a different path back
 - See Appendix at the end for a diagram

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Problem Solving

How to handle the problems that will inevitably happen

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Proword Is Part of the Message

- What if a proword like “figures” is part of the message?
- Answer: Use “I spell”
- Examples:
 - Written: “The latest figures are encouraging.”
 - Spoken: “The latest figures / SPELL foxtrot india golf uniform romeo echo sierra <pause> are encouraging.”
 - Written: “Itemize 4 figures each.”
 - Spoken: “Itemize FIGURE four <pause> figures / SPELL foxtrot india golf uniform romeo echo sierra <pause> each.”

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Message Is Too Long for the Form

- When you run out of room on the form when receiving a message:
 - Make it *abundantly* clear on page 1 that there is more than one page (“Page 1 of X”)
 - Use plain paper (Form 1) for subsequent page(s)
 - Add Origin Message Number and “Page X of Y” to each page
 - Use only front of paper
 - Copying and/or scanning often misses the back of pages
 - Immediately staple or otherwise affix all pages together

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Untrained Operator; Known Form

- What if an Operator is sending a known form poorly?
 - Suggest a process
 - “Send fields top to bottom, left to right, 5 fields at a time. For long fields, send 5 words at a time”
 - If that doesn’t work, switch to a more directive approach
 - Ask for individual fields: Origin Message Number?, Date?, Time?, Handling? ...
- If the problem continues with the next message, it might be time to suggest another operator through discreet channels such as Command Net, Telephone, etc.

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Untrained Operator; Unknown Form

- If an Operator is sending a message poorly (using an unfamiliar form you haven’t seen) – what do you do?
 - Suggest a process:
 - “First, tell me each of the field numbers and field names on the form, top to bottom, left to right. Pause after each one (or five) and wait for an acknowledgment by me.”
 - Now, tell me the field number (or name) followed by the value.

Use MP Techniques with Net Scripts

- Use with caution on Net Scripts (Open/Close Net, H&W, etc)
 - Prowords are helpful when sending things that might be misunderstood but do not overuse them when reading net scripts.

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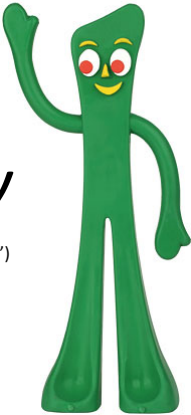
Unusual Information to Communicate

- Just about anything can be sent with our existing rules
 - Avoid making up new prowords
- Still, you may come across something that isn’t covered yet
 - That’s why we added to the ARRL message handling procedures
- If you’re really sure that you must create a new proword
 - Use the existing prowords as a guide for how it should work
 - Set the expectation for the receiving station up front
 - “I will use the introductory proword WIDGET” before speaking a group of type widget phonetically
 - Use it consistently
 - Report it on our discussion groups
 - If appropriate, we’ll adopt it into our standards

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Whatever the Problem, Remember ...



Semper Gumby

(In case you don't know Latin, that means "Always Flexible")

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Summary

You should now be able to:

- Properly send, receive and log 3rd party written messages, including messages using formats that you haven't seen before
- And you should be able to do it precisely!

This was the classroom portion of your training
Practice is the only way to become and remain proficient!

- Quarterly On-air training nets
- Exercises, drills, and public service events
- Repeat this class until it's automatic

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Final Assignment

Please complete the Class Evaluation within one week.

To get course credit you need to:

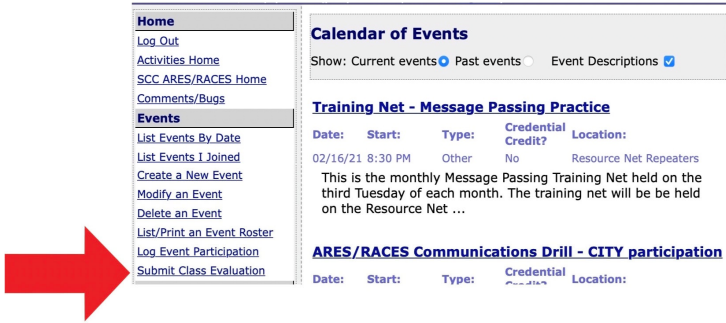
- a) Attend at least 90% of the class
- b) Participate in class
- b) Complete the class evaluation

If you do these, you will get credit for the course.

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Online Class Evaluation

Log into <https://www.scc-ares-races.org/activities/events.php>
Click "Submit Class Evaluation" in Events



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Thank You!

- If you have questions or feedback about this or other training activities, join our Training discussion group. This is a moderated group:
 - <https://www.scc-ares-races.org/discuss-groups>

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Message Relay Exercise

- We are only to send the message number, priority, and subject. We will not send the rest of the message content for this exercise.
- Xanadu EOC Sends ICS-213 to Shelter 1 via Fire Station 4
 - o [Slide 74](#)
- Fire Station 4 relays to Shelter 1 and receives Destination Message Number from Shelter 1
 - o [Slide 76](#)
- Fire Station 4 relays Destination Message # to Xanadu EOC
 - o [Slide 78](#)

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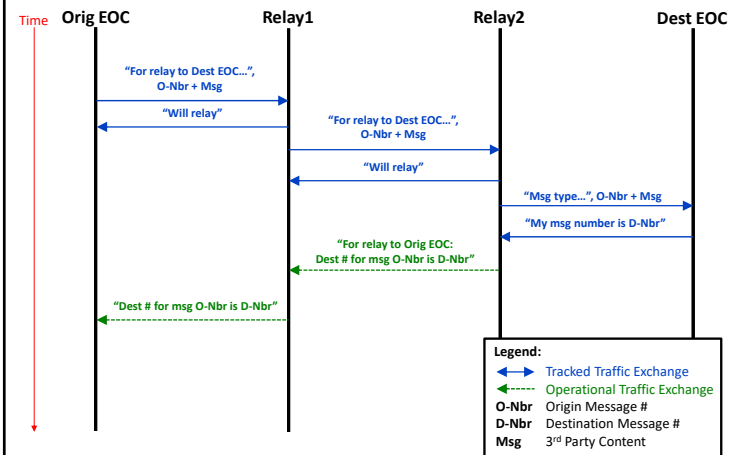
Appendix

Example, Relaying with 2 relay hops

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Relay – 3 Hops



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