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0

Message Passing
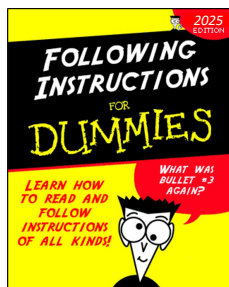
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Revised: 19-January-2025

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1

Housekeeping

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

2
2

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 …

3

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.

4

Fictitious Call Signs

Examples used in training classes 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
    XND ECO

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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!

6

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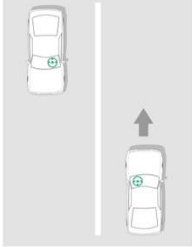
LEFT-HAND TRAFFIC
- CARS DRIVE ON **LEFT**-SIDE OF ROAD
- STEERING WHEEL ON **RIGHT**-SIDE OF CAR

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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.

- Carefully review Page 9, Voicing Symbols so are familiar with this before class.

- We will not be teaching what is in that document, just reviewing it during class.

- We will have several practice sessions using material from this document during class.

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

Message Handling Roles - Graphical
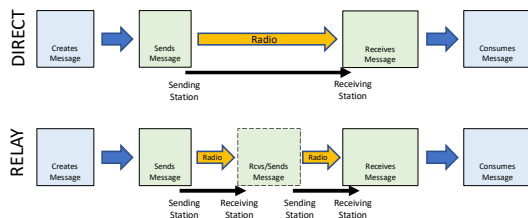
Message Types

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
    - Immediate (ASAP), Priority (< 1 hr), Routine (< 2 hr)
- Key: Radio operators must conform to the 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

| Message Author Creates Message | → | Origin Station Sends Message |

- 3rd Party written messages <u>always</u> 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
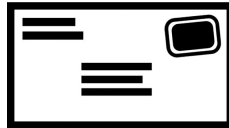
20

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
  - MTV-246 Mountain View EOC
- For today's exercises use your initials and a sequential number, i.e., ABC-100, ABC-101, ABC-102, ...

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Radio Routing Information

Example: ICS-213

- Written messages must have routing information that a radio operator needs to send, deliver, and track a message
  - Message Numbers
  - Date, Time
  - Handling Order
  - To/From
  - Radio Operator Info
- Some forms contain these fields

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Radio Routing Information (cont.)

Example: ICS-213RR

- Some forms do NOT have all the fields we need to route a message via radio

Example: ICS-213RR

- Message Numbers:
- Date, Time:
- Handling Order:
- To/From:
- Radio Operator info:

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Radio Routing Slip

- Use when sending or receiving a form that does not contain radio routing info
  - A place to write the missing fields

- NOT a substitute for an ICS-213 Message Form
  - Do NOT write a message on the Radio Routing Slip

- Instructions on back
  - Short version of Message Author instructions also on front

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Connecting Form and Routing Slip

- Attach routing slip to the front of the form being sent/received
  - Staples, …

- Write Origin Msg Nbr on the top right of the agency's form
  - Helps you find the corresponding Routing Slip if it becomes detached

- Write Form Type / Topic on the Routing Slip
  - Helps you find the corresponding form if it becomes detached

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Message Passing - Tabletop

What Routing Info Should be Entered?

- The author of a 3rd party message may not know how to address the message (TO information)
  - 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:** ◯Immediate (ASAP) ◯Priority (<1 hr) ◯Routine (<2 hr)		
T O	⁵ **ICS Position:**	**F R O M**	⁹ **ICS Position:**	
	⁶ **Location:**		¹⁰ **Location:**	
	⁷ **Name:**		¹¹ **Name:**	
	⁸ **Contact Info:**		¹² **Contact Info:**	

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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 extra copies to share
- Message author decides
  - Faster/slower handling
  - To different location/position
  - We only recommend if the message author does not know the information

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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: / Now / High (0-4 hrs) / Medium (5-12 hrs) / Low (12+ hrs)	Then "Handling" is: / Immediate (ASAP) / Immediate (ASAP) / Priority (<1 hr) / 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

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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			
Allied Health Facility Status	Routine (<2 hrs)	If open: PHDOC Else: County EOC	PHDOC: Health Care Liaison 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

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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

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Exercise: Radio Routing Information

RACES Mutual Aid Request

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

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Common 3rd Party Procedures

Applies to any 3rd party messages

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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

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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	FROM		TO		Message
(24:00)	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1935	XNDCP5	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 <u>clearly</u> indicate that all entries are part of the same message

5.	COMMUNICATIONS LOG				
Time	FROM		TO		Message
(24:00)	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

Form-specific Exercises

Proper prowords and procedures works for any form

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
- We will discuss the form, then do and exercise with it.
- Exercise 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

Slide 47 — ICS-213

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/Receipent Use Only
- Radio operator fills out bottom

Take out an ICS-213 Form

Slide 48 — Exercise: ICS-213 #1 (Single station)

At receiving station: Shelter 1

Did you fill this out?

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

Slide 49 — Exercise: ICS-213 #2 (Multi-station/receive)

At receiving station: Shelter #

Did you fill this out?

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

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

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, Handing
  - To, From
  - Report Type, Jurisdiction Name
  - 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

Exercise: OA Jurisdiction Status (City > County)

At receiving station: County EOC

Slide 53

OA Shelter Status

- Usage
  - Report shelter status when WebEOC is not available
- Report Type: Update vs. Complete
  - If Complete, all <u>underlined fields</u> are required
- Recommended field groupings
  - Msg Nbr, Date, Time, Handing
  - To, From
  - Report Type, Shelter Name
  - 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

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Slide 54

Exercise: OA Shelter Status (Shelter > City EOC)

At receiving station: Xanadu EOC

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Slide 55

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:** 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

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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.

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Exercise: EOC-213RR (City > County)

At receiving station: County EOC

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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

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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

What's missing?

Radio routing information!

Use a Radio Routing Slip!

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Slide 66

Exercise: Unknown Form

At receiving station: Xanadu EOC

WCP-207

Morning Donut Order

1. Date: <today>
2. Time: 11:35
3. Department: RACES
4. Glazed: 6
5. Jelly: 2
6. Assorted: 1 dozen

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

SCCo ARES/RACES Radio Routing Slip — Page 1 of 2

Slide 67

Relaying Messages

Slide 68

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 or EOC-EOC radio 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.
- Does is sound complicated?
- Think it through, follow our stand procedures with slight modifications to incorporate the relay station.

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Relay – 2 Hops
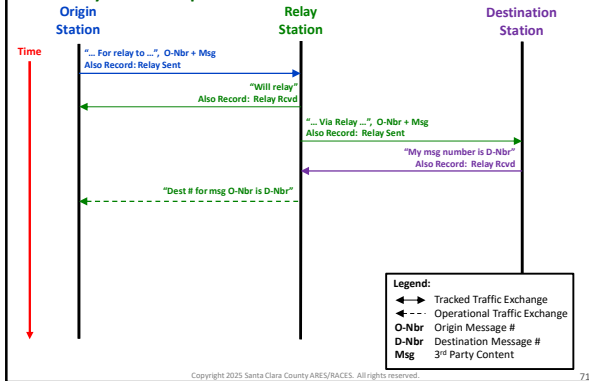
71

Message Relay Exercise

- Xanadu EOC needs to send an ICS-213 message to Shelter 1 using Message # XND-321. The subject is water.
- Fire Station 4 will be used as the relay.
- Shelter 1s next message number is SO1-104.
- For this exercise we will only send the Message Number, Handling Order, and Subject. We will not send the rest of the message content to save time.

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Message Relay Exercise (Cont.)

- The time is 1130
- Xanadu EOC Sends ICS-213 to Shelter 1 via Fire Station 4.

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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

Radio Operator Only:		
Relay:	Rcvd:	Sent:

- Both stations log the traffic on their ICS-309

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Relay Exercise: Message Hop 1

Xanadu EOC	→Message	Xanadu Fire Station 4		Xanadu Shelter 1
Origin Station		Relay Station		Destination Station

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 Call Sign/ID	Msg #	TO Call Sign/ID	Msg #	Message
1130	*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 Call Sign/ID	Msg #	TO Call Sign/ID	Msg #	Message
1130	*EOC*	*XND-321*	*Fire 4*		*ICS-213: Water / Relay from EOC*

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Message Relay Exercise (Cont.)

• The time is 1135

• Fire Station 4 relays to Shelter 1 and receives Destination Message Number from Shelter 1. Shelter 1 uses message # S01-104 for their received message.

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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

Radio Operator Only:		
Relay:	Rcvd:	Sent:

• Relay station should update previous log entry
  – Add Destination Msg Nbr to 1st hop message
• Both stations log the traffic on their ICS-309

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Relay Exercise: Message Hop 2

Xanadu EOC →Message→ Xanadu Fire Station 4 →Message→ Xanadu Shelter 1
←Dest Msg #←

Origin Station — Relay Station — Destination Station

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 #	
1130	*EOC*	*XND-321*	*Fire 4*	*S01-104*	*ICS-213: Water / Relay from EOC*
1135	*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 #	
1135	*Fire 4*	*XND-321*	*Shelter 1*	*S01-104*	*ICS-213: Water / Relay From EOC*

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Message Relay Exercise (Cont.)

• The time is 1138

• Fire Station 4 relays Destination Message # to Xanadu 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 XXX-123, Dest Msg Nbr is: YYY-456"
  – "Copy"
• Both stations 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 Exercise: Receipt Hop 1

Xanadu EOC → Message → Xanadu Fire Station 4 → Message → Xanadu Shelter 1
Origin Station ← Dest Msg # --- Relay Station ← Dest Msg # --- Destination Station

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 #	
1130	EOC	XND-321	Fire 4	S01-104	ICS-213: Water / Relay from EOC
1135	Fire 4	XND-321	Shelter 1	S01-104	ICS-213: Water / Relay to Shelter 1
1138	Fire 4		EOC		Origin # XND-321 = Dest # S01-104

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 #	
1130	EOC	XND-321	Fire 4	S01-104	ICS-213: Water / Relay to Shelter 1
1138	Fire 4		EOC		Orig # XND-321 = Dest # S01-104

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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 *I SPELL* foxtrot india golf uniform romeo echo sierra <pause> are encouraging."

  - Written: "Itemize 4 figures each."
  - Spoken: "Itemize *FIGURE* four <pause> figures *I SPELL* foxtrot india golf uniform romeo echo sierra <pause> each."

- In these example, when "figures" is spoken, it is either an introductory proword or a real word. Since it is followed by "I SPELL", rather than digits, we know it is a real word.

84

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

85

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 3rd Party mesages 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

Home
Log Out
Activities Home
SCC ARES/RACES Home
Comments/Bugs
Events
List Events By Date
List Events I Joined
Submit Class Evaluation
My Profile
My Contact Info

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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:
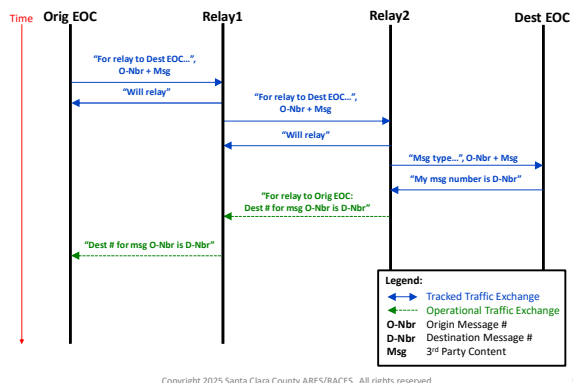 - https://www.scc-ares-races.org/discuss-groups

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Appendix

Example, Relaying with 2 relay hops

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Relay – 3 Hops

Time   Orig EOC   Relay1   Relay2   Dest EOC

"For relay to Dest EOC…",
O-Nbr + Msg

"Will relay"

"For relay to Dest EOC…",
O-Nbr + Msg

"Will relay"

"Msg type…", O-Nbr + Msg

"My msg number is D-Nbr"

"For relay to Orig EOC:
Dest # for msg O-Nbr is D-Nbr"

"Dest # for msg O-Nbr is D-Nbr"

Legend:
Tracked Traffic Exchange
Operational Traffic Exchange
O-Nbr   Origin Message #
D-Nbr   Destination Message #
Msg   3rd Party Content

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Relay – 3 Hops With Different Return Path

Legend:
- ←——→ Tracked Traffic Exchange
- ←------ Operational Traffic Exchange
- **O-Nbr** Origin Message #
- **D-Nbr** Destination Message #
- **Msg** 3rd Party Content