

A Case for Learning and Practicing Winlink Communications Skills



WHAT IS WINLINK COMMUNICATIONS?

- Winlink communications allows email message transactions via amateur radio digital communication modes that are totally independent or partially dependent upon internet connectivity
- It is an alternative means for supporting EMCOM record traffic when we are denied internet connectivity

- Winlink Communications has become the national standard means for sending and receiving amateur radio-based emergency record traffic
- Even the Department of Homeland Security Cybersecurity and Infrastructure Security Agency (CISA) uses Winlink Communications
- Army MARS and AFMARS interoperability COMEX 23-4 exercise with amateur radio
 - 89% message exchanges during amateur radio Simulated Emergency Test (SET) with MARS were Winlink Messages

WHAT IS EMERGENCY COMMUNICATION MESSAGING?

Voice Messaging

1. Low precision, short tactical messages ROUTINE traffic
2. Time-critical urgent messages that cannot tolerate transmission delays (PRIORITY & EMERGENCY TRAFFIC)
3. Voice recognition

Data Messaging

1. High precision record traffic
 - a. Complex messages consisting of names of prescriptions
 - b. Extensive list of logistical items
 - c. Detailed descriptions and instructions
2. Messages that can tolerate some delay
3. In general, record traffic that would be too cumbersome and time consuming disseminated by voice

Winlink allows us to create, transmit, and receive scripted message traffic.

ICS Message Traffic

- ICS-213 General Message Form
- ICS-205 Incident Radio Communications Plan
- ICS-214 Activity Log
- ICS-213RR Resource Request Message

Other Message Traffic

- Field Situation Reports
- Incident Action Plan
- Welfare Message
- Incident Status Report
- Hospital Causality – Fatality Report
- American Red Cross Forms
- Local WX Report
- And, many more

FIELD SITUATION REPORT

Valencia County ARES

Setup [Click to add an agency or group name](#) [Load Field Situation data](#) [Form info](#)

*For Non-Express recipients, this form is sent as plain text in the message body.
Once this page is submitted No changes or editing of this message are allowed*

PRECEDENCE: DATE/TIME: TASK #

FROM:

TO:

INFO (CC):

Call signs or E-mails entered into the TO or INFO fields above, can be multiples separated by a semicolon ;

1. Is there an **EMERGENT/LIFE SAFETY Need** YES NO

2. City County: State: Territory:

3. Latitude and longitude: LAT LON . MGRS Grid
*LAT and LON are required to map this SpotRep. If entering manually use Decimal Degree format or from an attached GPS device.
By default LAT, LON and MGRS to the center of the grid square listed in Express Settings*

4a. POTS landlines functioning? YES NO Unknown - N/A

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CENTURYLINK

4b. VOIP landlines functioning? YES NO Unknown - N/A

If no, state provider.

5a. Cell phone voice calls functioning? YES NO Unknown - N/A

VERIZON

5b. Cell phone texts functioning? YES NO Unknown - N/A

If no, state provider.

6. AM/FM Broadcast Stations functioning? YES NO Unknown - N/A

If no, provide broadcast station callsign/frequency that is off-the-air.

7a. OTA TV functioning? YES NO Unknown - N/A

If no, identify TV station.

7b. Satellite TV functioning? YES NO Unknown - N/A

If no, state provider.

7c. Cable TV functioning? YES NO Unknown - N/A

If no, state provider.

8. Public Water Works functioning? YES NO Unknown - N/A

Comments

9a. Commercial Power functioning? YES NO Unknown - N/A

If no, state provider.

9a. Commercial Power functioning? YES NO Unknown - N/A
If no, state provider.

9b. Commercial Power Stable? YES NO- Brown outs/blinking lights Unknown - N/A
PNM

9c. Natural Gas Supply functioning? YES NO Unknown - N/A
If no, state provider.

10. Internet functioning? YES NO Unknown - N/A
COMCAST

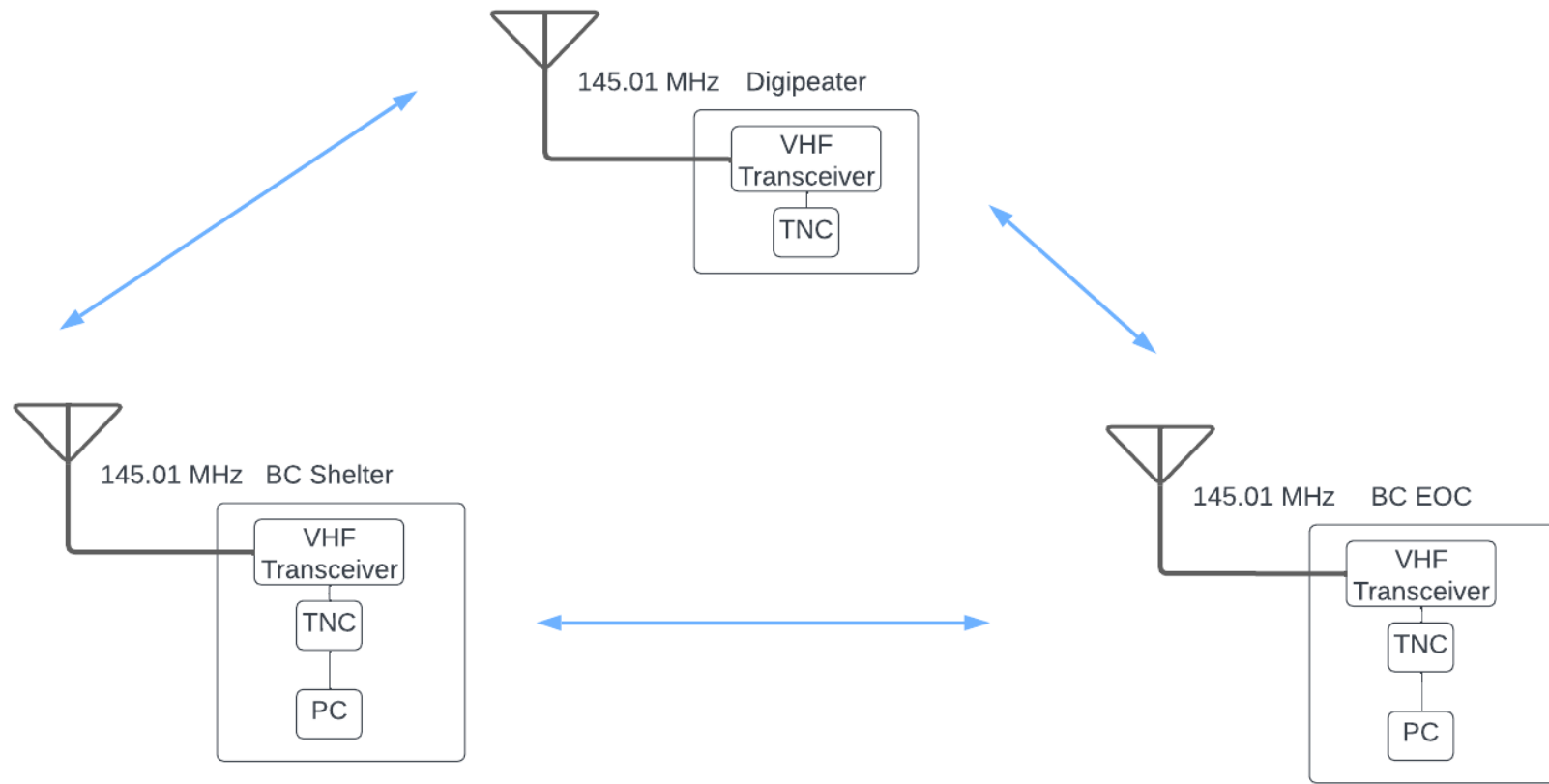
11a. NOAA weather radio functioning? YES NO Unknown - N/A
Identify NOAA Weather Radio Transmitter by frequency, call sign or location.

11b. NOAA weather radio audio degraded? YES NO Unknown - N/A
Identify NOAA Weather Radio Transmitter by frequency, call sign or location.

12. Additional Comments *Brief summary of current situation - expected outage times, major observations, etc.*
NONE

13. POC JIM FRAZIER, KC5RUO

PACKET PEER-to-PEER



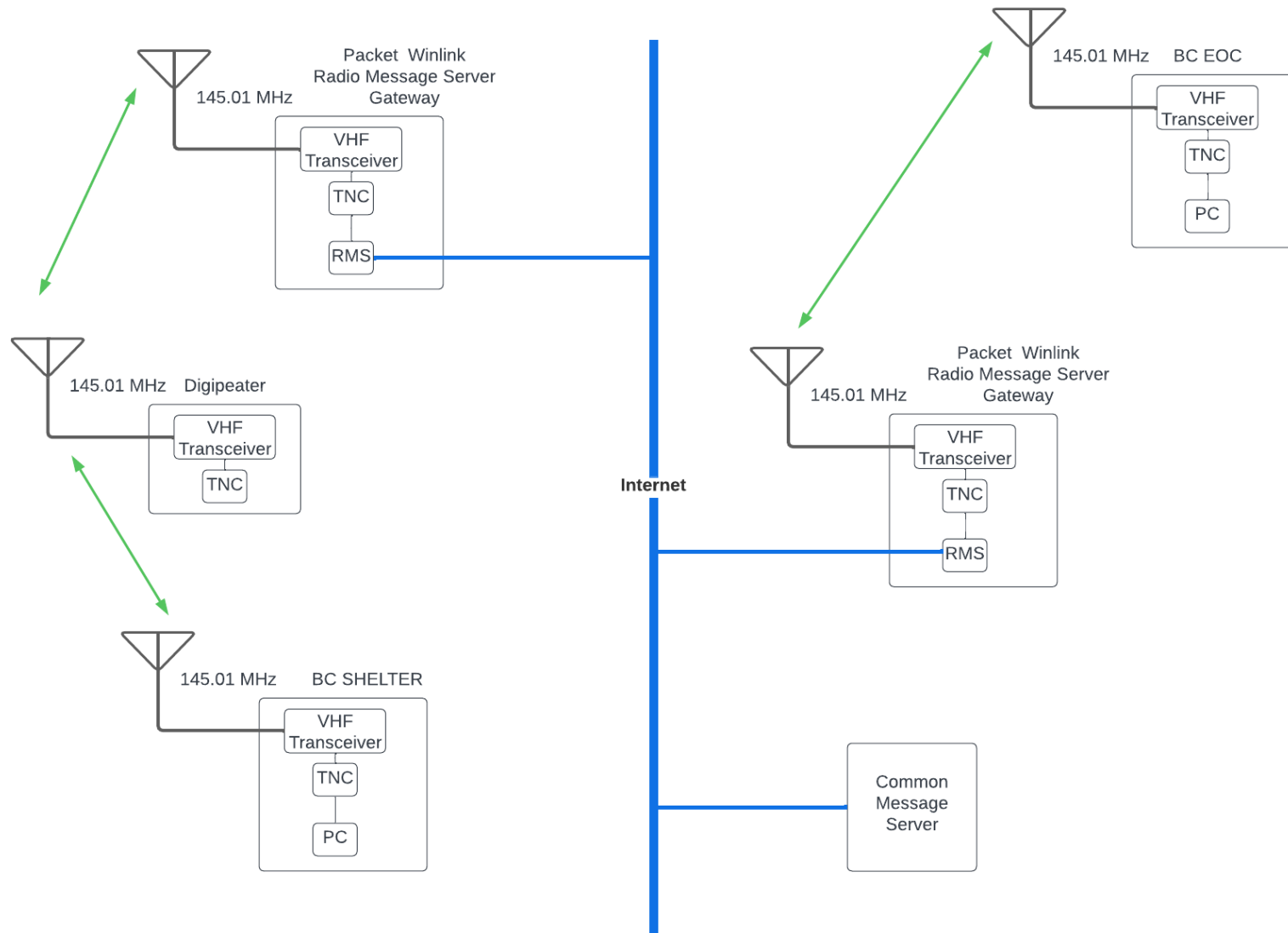
Not dependent upon the internet

Uses mountain top digipeaters

Packet Radio
AX.25 protocol

BFSK FM
1200 bps

PACKET WINLINK



Partially dependent upon the internet

Uses mountain top digipeaters

Packet Radio AX.25 protocol

FM BFSK 1200 bps

Practice Packet Winlink using the local Radio Message Server (RMS) Gateways

- NM5RR-10, 145.010 MHz
- KC5QOC-10, 145.010 MHz
- NM5PB-10, 145.010 MHz
- KC5UKE-10, 145.070 MHz
- NM5LS-10, 145.090 MHz

Start with Packet P2P and Packet Winlink first and then learn the other Winlink Communication Modes

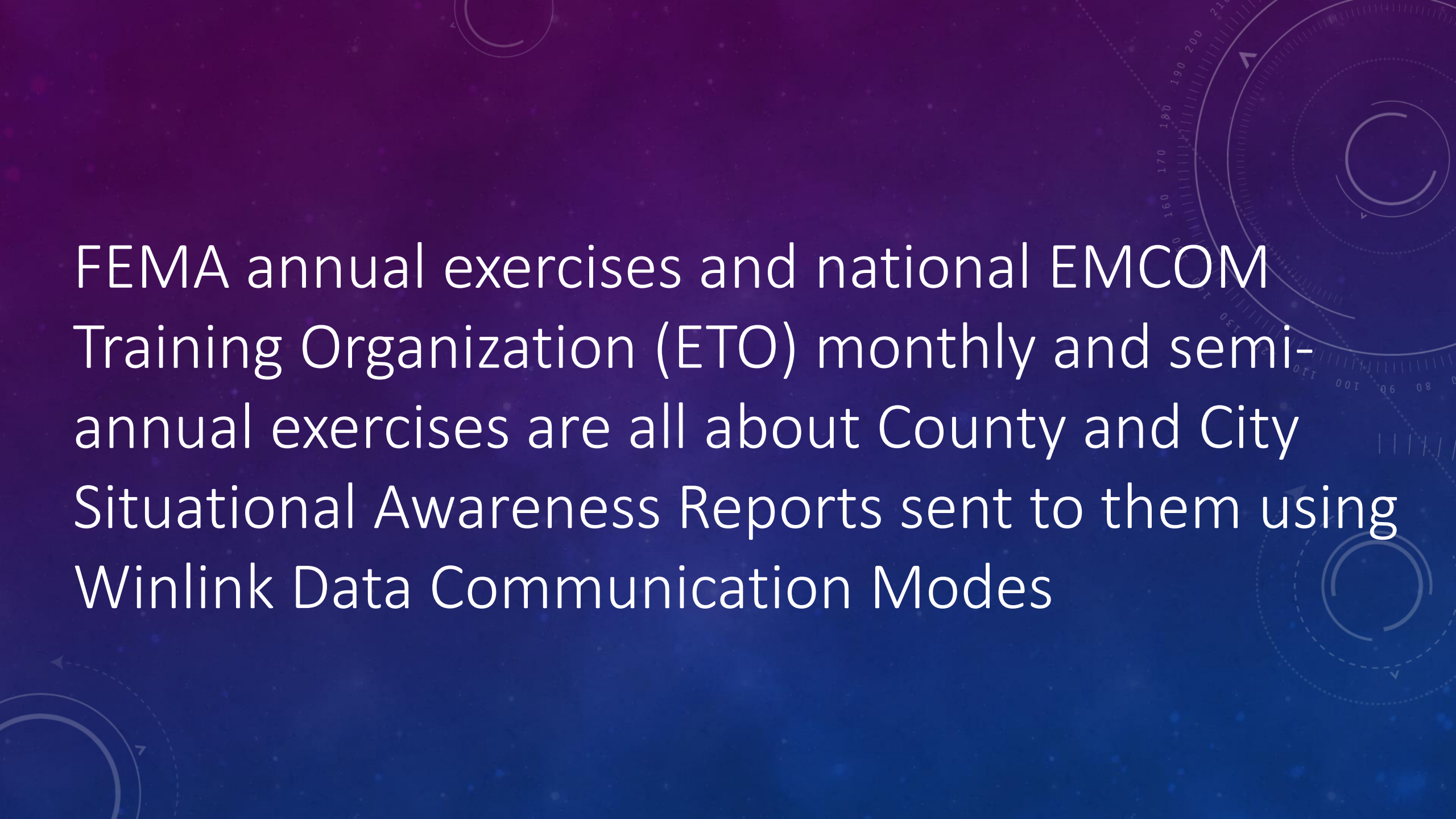
- VARA HF P2P
- VARA HF Winlink
- VARA HF Radio-only Mode
- VARA FM P2P
- VARA FM Winlink
- Attributes of the Winlink Communication Modes can be found on the BCARES website at <https://nmbcares.files.wordpress.com/2023/07/how-bcares-communicates-today-1.pdf>

1 – ON- 1 TRAINING OPPORTUNITIES

- Jim Frazier, KC5RUO, jimfraziernm@comcast.net
- If you prefer the self-study approach there are training guides on the BCARES website, nmbcares.net
- Both SCARES and BCARES classes have been conducted in the past

Radio operators must train on a regular basis to maintain proficiency with the Winlink EMCOM modes

- BCARES Packet Station is usually configured for Packet P2P operation
- Weekly Winlink Nets
 - Winlink Tuesday
 - Winlink Wednesday Nets (Virginia, North Texas)
 - GLWIN Net
 - Kentucky Net
 - American Legion Post 42 Net
- Emergency Training Organization (ETO)
 - Monthly exercise
 - Major semi-annual exercises
- FEMA sponsored annual exercise
- BCARES exercises

The background is a dark blue gradient with faint, light blue technical graphics. On the right side, there are several concentric circles and arcs, some with tick marks and numbers (160, 170, 180, 190, 200, 210, 220, 100, 90, 80, 110, 120, 130, 140, 150) resembling a dial or gauge. There are also some dashed lines and arrows pointing in various directions, suggesting a technical or data-related theme.

FEMA annual exercises and national EMCOM Training Organization (ETO) monthly and semi-annual exercises are all about County and City Situational Awareness Reports sent to them using Winlink Data Communication Modes

BCARES Exercises are becoming more and more Winlink Data Communications Centric

- October 2022 SET
 - 12 Packet P2P Message Exchanges
 - 2 Packet Winlink Message Exchanges
 - 3 VARA FM Winlink Message Exchanges
 - 8 VARA HF Winlink Message Exchanges
- March 2023 Carrington Event Exercise – a NM Statewide Exercise
 - 106 VARA HF P2P Message Exchanges
 - 18 VARA HF Radio-only Message Exchanges
 - 10 VARA FM Winlink Message Exchanges
 - 19 Packet P2P Message Exchanges
- October 2023 SET
 - 30 VARA HF Message Exchanges
 - 30 VARA FM Message Exchanges
 - 23 Packet Message Exchanges

The background is a dark blue gradient with faint, light blue technical graphics. On the right side, there are several circular gauges or dials with numerical scales (e.g., 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210) and arrows. There are also some dashed lines and other circular patterns scattered across the background.

MAKE IT A 2024 NEW YEAR'S
RESOLUTION TO LEARN PACKET P2P
AND PACKET WINLINK

QUESTIONS?

