



Tennessee state Guard Communications Capability



Tennessee State Guard

Major Communications Activities

- Operation Katrina 2005
- Operation Vigilant Guard 2008
- Boy Scout Jamboree 2010
- National Level Exercise 2011
- TEMA –MARS Interoperability FTX 2011
- TEMA Aux-Comm Training 2010-2011
- Alvin C. York, Field Day 2012



Tennessee State Guard Communications Capability

Units	FCC Tech	FCC Gen	FCC Extra	FCC Total	Signal Personnel	MARS Trained
1st Regiment	7	3	3	13	1	2
2nd BST	17	3	4	24	21	3
3rd Regiment	22	23	4	53	10	1
4th Regiment	11	4	3	17	4	4
61st Medical	3	0	1	4	0	0
Division HHC	0	5	3	8	4	2
Division Totals:	60	38	18	119	40	12



HF Digital Communications

Provides wide area coverage from inside a disaster area without the Internet or phone service with a proven record of reliability, and continues to be responsive to the needs of Emergency Management Personnel and

To support digital communication between TEMA Region and State EOC.

To support digital communication between TNSG and the TNARNG EOC.



Deployable Communication Capabilities

- HF Communications Network
- Digital Text Network
- G6 VHF Radio & Repeater Cache
- P.A.C.E.
- G6/TOC Operations Timeline
- Time Phase Approach for Deployment Readiness



T NSG HF Signal Stations

1ST REGIMENT
AAN4YR-1
MEMPHIS

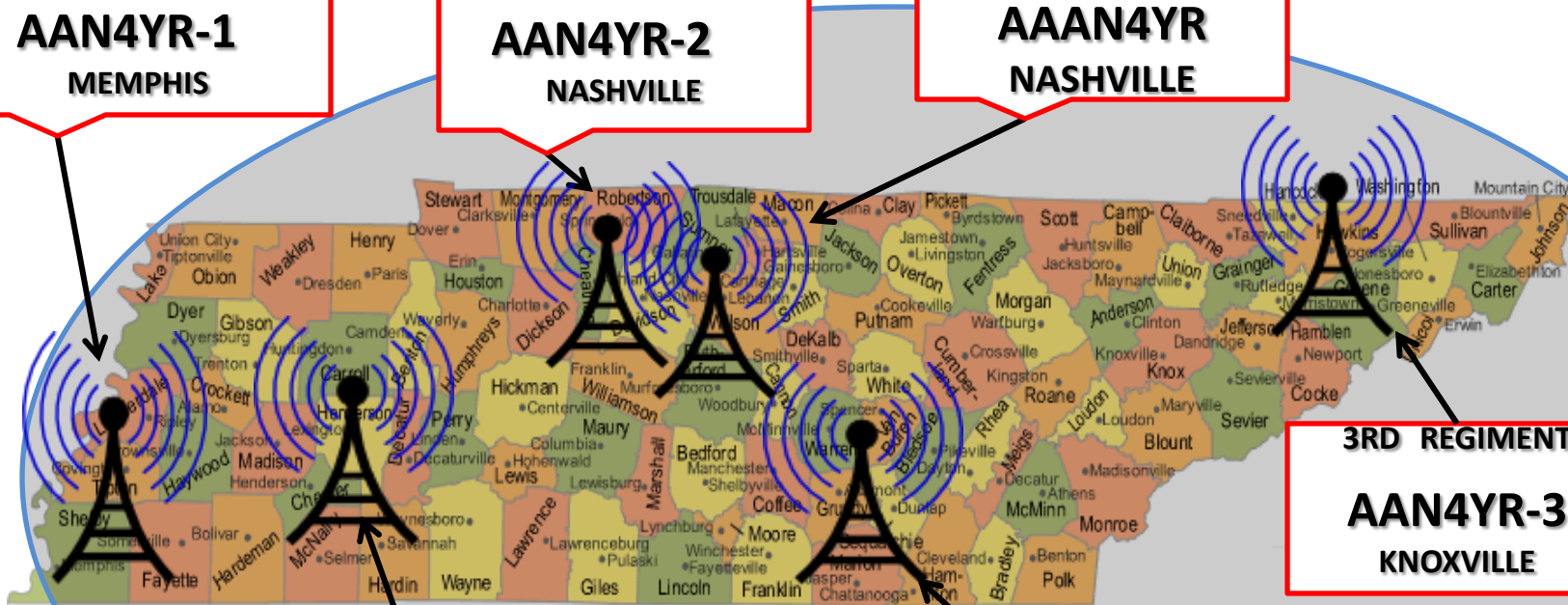
2nd REGIMENT
AAN4YR-2
NASHVILLE

TNSG HQ
AAAN4YR
NASHVILLE

3RD REGIMENT
AAN4YR-3
KNOXVILLE

2nd FSB
AAN4YR-5
JACKSON

4TH REGIMENT
AAN4YR-4
CHATANOOGA

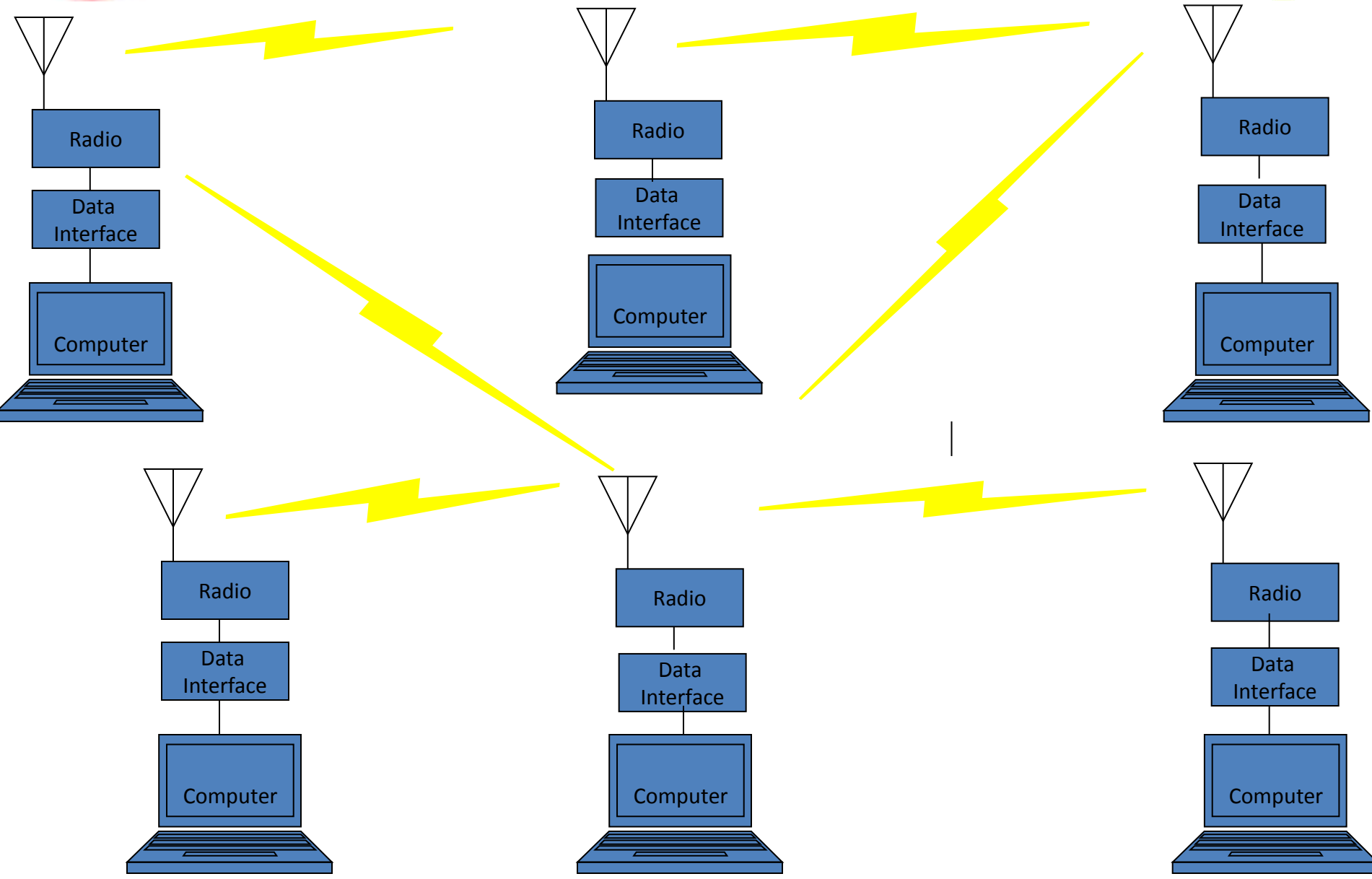


“The Volunteers – October 7, 1780”



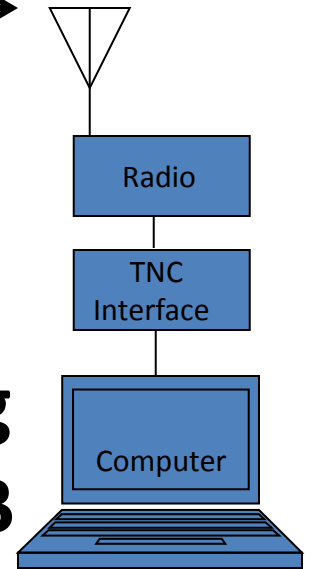
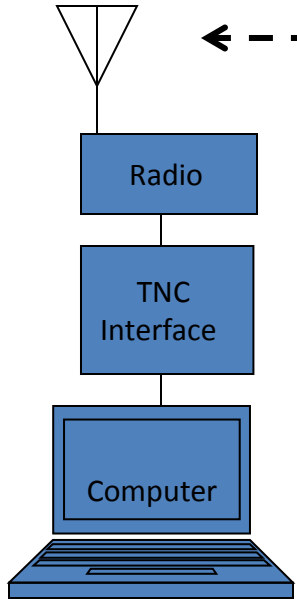
Communication Capabilities

Digital Text Network





Digital Text Messages VIA VHF or HF RADIO

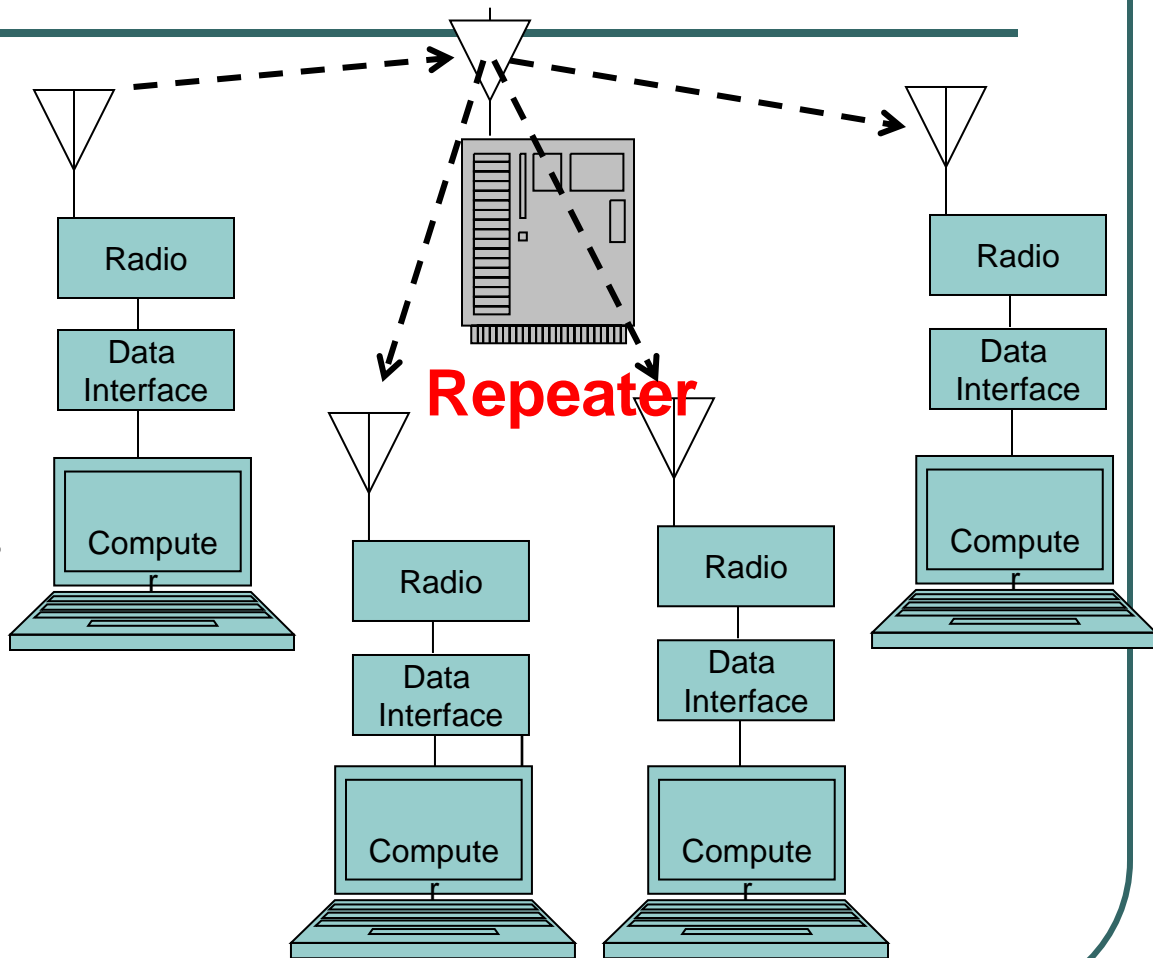


Digital text Messages are send station to station by error free binary transmissions over HF using a compressed binary protocol (FBB extension).



Messages VIA VHF Radio & Repeaters

LOS communications are performed via Station to Station and by VHF Repeaters which replicates message traffic across all CMSs in real-time





WL2K

Network Topology

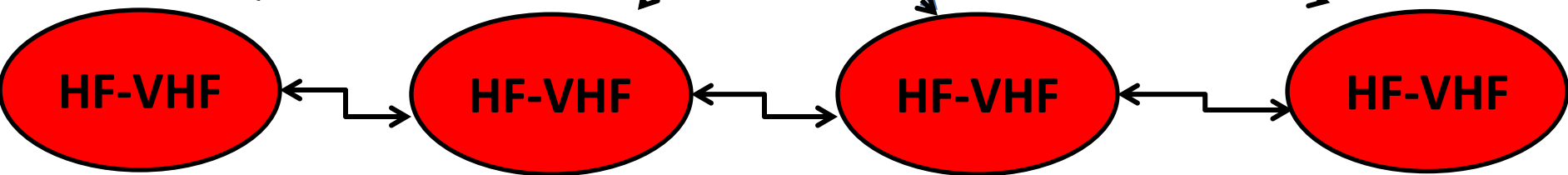
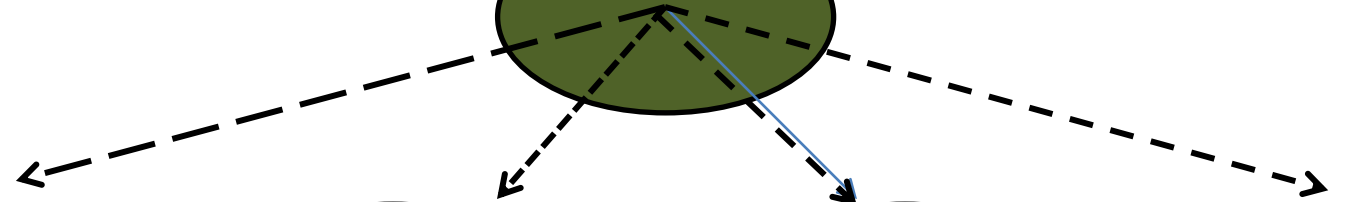
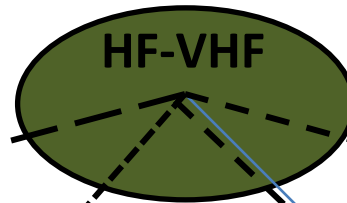
- **Redundant, Hardened CMS Servers**
- **Secure locations**
- **Backup Power**
- **Commercial Servers & Routers**



Deployable Communication Capabilities – HF Digital & VHF Network



Division Main



Regimental TOC

Regimental TOC

Regimental TOC

Regimental TOC



Battalion CP

Battalion CP

Battalion CP

Battalion CP



Deployable Communication Capabilities - TNSG

Equipment

Systems Services Equipment

Telephone	CELL	6
VHF Mobile Radio	Mutual Aid	6
HF Mobile Radio	Mutual Aid	10
VHF Handheld Radio	Mutual Aid	20
VHF Repeater	Increases radio range	1
Cross-Band Radio's	Mutual Aid	1
Wireless Router	Network Expansion	1
Printer / All in One	Print/Fax/Copy/Scan	1
Printer / LaserJet	Print Large Quantities	2
Generator	Power 7.5 Kw	2
Tent	Equipment Shelter	5

Personnel

- 18 – 24 personnel.
- Self Sustained for first 72 hours.

Interoperability

- Email/Winlink/RMS Express
- Cell- Phone/Land Line
- Handheld & Mobile Radio's
- HF Radio's
- Cross Band Repeating, VHF



Communication Capabilities

HF Radio



- Long Range Communications
- 6 Sites across state have stationary & portable systems.
- 4 Permanently assigned frequencies.
- JEOC acts as control station for the TNSG during disaster.





Primary, Alternate, Contingency & Emergency Comm Plan.....



Communications Sequence	P <u>1st</u> HF Digital	A <u>2nd</u> HF Voice	T <u>3rd</u> Wireless Voice/Data (Cell Phone Blackberry)	E <u>4th</u> Winlink- Telnet
MEMPHIS - 1st REGIMENT	X	X	X	X
JACKSON – 2nd BST	X	X	X	X
KNOXVILLE – 3rd REGIMENT	X	X	X	X
CHATTANOGA – 4TH REGIMENT	X	X	X	X
NASHVILLE - TNSG HQ	X	X	X	X



G6 TOC Operations Timeline



Day 0:

- G3 Recall Roster.
- Brief Situation (WARNO).
- Contacting Units for comm status.
- Initiate G6 TOC Checklist Procedures.
- Tactical and Fixed comm Planning/Strategy/NetOps.
- Advising support of Mission Tasking Orders.
- Advise comm units, on comm procedures. (Annex K)
- Spectrum/COMSEC Management.
- Maintaining TOC comm systems.
- Prepare/Manage/Report Comm Stats.

Day 1 - Endex:

- 24/7 Ops.
- Tactical and Fixed comm Planning/Strategy/NetOps.
- Advise support of Mission Tasking Orders.
- Advising comm units, sites on comm procedures (Annex K).
- Spectrum/COMSEC Management.
- Maintaining TOC comm systems.
- Prepare/Manage/Report comm stats.
- Brief/Execute OPORD & or FRAGO instructions.

Endex:

- Execute FRAGO instructions.
- Consolidate all historical data.
- Advise support of Mission Tasking Orders.
- Maintaining TOC comm systems.
- Prepare/Manage/Report comm stats.
- Prep TOC comm systems for next event.
- Safety Brief for stand down of assigned personnel.



Time Phased Approach

