Middle Tennessee Trunked Radio System Comprehensive Communications System Failure Recovery Plan - Backup Communications Plan

Purpose:

The effectiveness of the Middle Tennessee Trunked Radio System (MTRS) 700MHz communications network is based on the proper planning for meeting the communications needs of the network users. This plan outlines the modes of operation of the Motorola 700MHz radio network and how radio system users should react in the event of varying stages of system degradation.

Modes of operation:

1. Wide Area trunking - normal operation of the network. This normal operation can include the complete loss of the Primary Prime Site, where the Geo-Redundant Prime Site will retain normal wide area trunking until the Primary Prime Site is restored.

2. Site Trunking – in the event of Master Site loss, individual RF sites will enter into Site Trunking mode, where users connected to the same RF site will be grouped together but not able to communicate with surrounding RF sites. Wireline console use will not function, but consoles will be able to communicate through backup radios at the dispatch.

3. Failsoft – complete loss of trunking capabilities will cause channels to merge based on the predefined Failsoft plan. Wireline console use will not function, but the consoles will be able to communicate through backup radios at dispatch, where the radios will be on the predefined Failsoft frequencies upon entering this degraded state.

In the event of any system malfunction, MTRS and Motorola technical staff will be notified of any outages and will respond accordingly to mitigate impact to radio system users.

Loss of tower site:

The loss of a single tower site within the voice network would not require alternate communications methods by dispatchers or units in the field. Coverage in the area surrounding the non-functioning tower site may be impacted, but normal system operation will continue. The 24hr/7day Network Operations Center in Schaumburg will be alerted by the local Network Monitoring software who will then notify MTRS management and Motorola technicians.

Site Trunking mode:

In the Site Trunking mode, "SITE TRUNKING" will be displayed on each of the radios in the field. Wireline console at (EMS Dispatch, Rutherford County Sheriff's Office, Murfreesboro Police Department and Rutherford County Emergency Communications District 911) operations will cease and backup radios in the dispatch centers will have to be used to communicate with field units. The radios will not require site lock to be used on the MTRS system when in SITE TRUNKING. However, on the TACN system, you will need to SITE LOCK onto the TIGER HILL Site. **Radio Alias:** Tiger Hill or Site 31 on your radio screen.

Course of Action- wireline console failure:

1. Dispatch consoles will remain functioning through the Conventional Site Controller at the dispatch sites.
2. Upon core connectivity loss, dispatch consoles will display "red X's" over the on-screen trunking resources and alert the dispatcher to core connectivity issues.
3. The dispatcher will have pre-programmed Site Trunking resources on the console screens to use backup consolettes at the dispatch center. They will contact field units and alert them to Site Trunking operation.
4. Instruct field units to change to a predesignated talkgroup that is being monitored by dispatch to resume operation. All field units will need to move to this predesignated talkgroup to resume field operation.

Course of Action – Wireless Consoles:

1. Normal operations can be continued as no impact to wireless consoles will be noted.

Failsoft:

In the Failsoft mode, "FAILSOFT" will be displayed on radios and each radio will begin to beep every 10 seconds. Wireline consoles at (EMS Dispatch, Rutherford County Sheriff's Office, Murfreesboro Police Department and Rutherford County Emergency Communications District 911) operations will cease and backup radios in the dispatch centers will have to be used to

communicate with field units. All talk groups will merge based on the plan listed below.

Course of Action – Wireline Consoles:

1. From a backup radio, contact field units to alert them of Failsoft Operation.
2. Have field units move to the predesignated talkgroups that are being monitored in the dispatch centers.
3. Dispatch consoles can additionally be used for communications on non-MTRS talkgroups or channels.

Course of Action – Wireless Consoles:

1. Channels will merge. Operations will continue on the predefined merged Failsoft channels.

Failsoft Channel Assignment:

Talkgroups	Failsoft Frequency	RF (Ch 7-14)
Rutherford County Sheriff 1 & 2, LE Common	772.85625 MHz	7
Jail, Jud Center, Juvenile, Juvenile Ct. Wrkhse	773.18125 MHZ	8
MEDFIRE, EMS Ops, FE Common, EOC	773.48125 MHZ	9
Ops, 1 Ops 2, Ops 3,	773.73125 MHZ	10
PAWS, Radio Svc, Hwy Dept,	773.98125 MHZ	11
Schools, Bus	774.48125 MHz	12

Complete system failure:

In the event of complete voice system failure, "OUT OF RANGE" will be displayed on radios and in the field. Wireline console at (EMS Dispatch, Rutherford County Sheriff's Office, Murfreesboro Police Department and Rutherford County Emergency Communications District 911) operations will all cease and backup radios in the dispatch centers will have to be used to communicate with field units. Field units should minimize radio traffic as channel availability will be limited. **NOTE: The Back Up Zone is utilizing the TACN System for temporary communications while the MTRS is repaired.**

Course of action– Public Safety Radio Users:

1. Contact field units by text message, paging system, or other means that the MTRS 700MHz radio network is out of service. Have all units move to the B-U Back Up Zone and turn to the below identified channel on their portable and mobile radios for their department/agency.

	Zone	Channel Name
	B-U- Backup	
1	B-U	LAW ENFORCMENT
2	B-U	EMER MGMT
3	B-U	HIGHWAY
4	B-U	PAWS
5	B-U	JUDICIAL CENTER
6	B-U	SCHOOLS
7	B-U	EMS
8	B-U	FIRE
9	B-U	JUV DET/WRKHSE
10	B-U	JAIL OPS
11	B-U	TA 1
12	B-U	TA 2
13	B-U	TA 3
14	B-U	TA 4
15	B-U	RUTH CO NET
16	B-U	RTHFD TALK