Allied Radio Matrix for Emergency Response (ARMER)
Standards, Protocols, Procedures

Document Section:	3 – Interoperability Standards	Status: Complete
Sub-Section:	State 3.16.0	
Procedure Title:	800 MHz Statewide Incident Response Talkgroups: STACs, ETACs, FTACs, & LTACs	
Date Established:		SRB Approval: 10/25/07
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1. Purpose or Objective:

To establish policy & procedures for use of standardized statewide 800 MHz major incident response interoperability talkgroups and standardized incident command zones in user radios. The statewide incident response talkgroups are a system wide resource intended to facilitate communications among and between different agencies and service branches which need to coordinate their operations during major incidents. This policy will provide standardized incident response radio communications capabilities for all service branches and most importantly will support the redeployment of mutual aid resources throughout the state. This policy will provide the radio communications structure necessary to enable effective situational awareness, command & control, and resource coordination in support of the incident command and management structure specified under NIMS. This policy will also serve to minimize usage conflicts when statewide incident response talkgroups are needed for multiple incidents.

A process will be established for obtaining and documenting variances from the Statewide Radio Board for any radios where the inclusion of the minimum required statewide incident response talkgroups is either operationally undesired or burdensome in some other way. This standardization, along with access to the list of non-compatible radios granted variances, will provide Incident Commanders and Communications Unit Leader personnel the ability to develop and adapt incident radio communications plans quickly and effectively without having to know in advance, or extract in the field, the code plug contents of each responding radio to determine compatibility.

2. Technical Background:

- **Capabilities**

It is possible to establish one or more groups of shared statewide incident response talkgroups used by agencies that share use of the regional 800 MHz radio system. These talkgroups can be programmed into user radios, dispatch centers, incident command posts and emergency operations centers. These shared statewide talkgroups can meet a wide range of tactical interoperability needs and can function as the primary communications component in local, regional and statewide all hazards response plans. Within technical limitations, patching of the statewide talkgroups can be done to non-hard patched conventional resources, local and regional shared talkgroups and to private talkgroups as needed to facilitate communications.

▪ **Constraints**

The highest and most effective level of interoperability is achieved when users share the same radio system and have shared talk groups directly accessible to them in their radios. Lower and less effective levels of interoperability include: switching to shared conventional frequencies, dispatch console patches, deployable portable gateways and radio caches (swap radios).

The availability of and the use of the statewide incident response talkgroups must be easily understood by radio user personnel who are primarily concerned with their mission and not with the operation of complex radios under stressful conditions. Standardization of capabilities, i.e. establishment of an incident response radio template with certain common talkgroups, will provide responding agencies with an assurance that they will have operational compatibility with any other agency they need to work with.

Only the minimum necessary quantity of the statewide incident response talkgroups should be mandated to be programmed into first responder radios to avoid unnecessarily driving radio purchases to higher cost or to radios that are unnecessarily complex and difficult to use.

Any 800 MHz radio system talkgroup can be in only one patch whether it is a hard (technician set permanent) or soft (radio console operator set temporary) patch. Some of these talkgroups may be used as part of a soft patch to common VHF channels that are restricted for use by personnel of specific services such as the MINSEF VHF frequency may only be used by law enforcement and EMS personnel.

3. Operational Context:

The shared statewide incident response talkgroups are a system wide resource to facilitate communications among agencies and service branches that typically do not communicate with each other on a regular day to day basis and to support effective command and management of major incidents under the NIMS protocols.

4. Standardized Policy

STAC TALKGROUPS – ALL USERS

TG Requirements	For Whom?
Required	All ARMER Users – All Radios – All Dispatch
Recommended	N/A
Optional	N/A
Not Allowed	N/A
Site Access	System Wide – All Sites

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	As Needed
Hard Patch	No	

ETAC TALKGROUPS - EMS

TG Requirements	For Whom?
Required	All EMS Users

Recommended	EOCs, Incident Command, 9-1-1 PSAPs
Optional	Hospitals
Not Allowed	Public Service
Site Access	System Wide – All Sites

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	As Needed
Hard Patch	No	

FTAC TALKGROUPS - FIRE

TG Requirements	For Whom?
Required	All Fire Users
Recommended	EOCs, Incident Command, 9-1-1 PSAPs
Optional	EMS, HAZMAT, Law Enforcement
Not Allowed	Public Service
Site Access	System Wide – All Sites

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	As Needed
Hard Patch	No	

LTAC TALKGROUPS – LAW ENFORCEMENT

TG Requirements	For Whom?
Required	All Law Enforcement Users
Recommended	EOCs, Incident Command, 9-1-1 PSAPs
Optional	EMS, Security
Not Allowed	Public Service
Site Access	System Wide – All Sites

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	As Needed
Hard Patch	No	

Primary Intended Use

STACs, ETACs, FTACs, and LTACs should be used as the primary resource for major mutual aid incidents involving joint response from multiple agencies and/or service branches. Individual service branches, i.e. EMS, Fire, Law Enforcement, etc., may establish incident level "thresholds" to further define when the shared statewide incident response talkgroups should be utilized.

Best Practices Encouraged

Agencies are encouraged to follow practices outlined by the US Department of Homeland Security SAFECOM Program. Key elements of SAFECOM include:

- Regional and statewide interoperability SOPs for incident response should be developed and should be molded to conform to the elements of the National Incident Management System.
- Users should be provided with regular comprehensive training on the interoperability

SOPs.

- Interoperability SOPs should be tested through realistic exercises to address potential problems.
- The interoperability systems and SOPs should be used every day for managing routine as well as emergency incidents requiring interoperability. In this optimal solution, users are familiar with the operation of the system and routinely work in concert with one another.
- Trained Communications Unit Leaders should be developed to assist with incident pre-plans and to provide on-scene incident support by managing communications and apply available technical solutions at larger or unexpected interoperability incidents.

Incident Scope and Geographic Area

The shared statewide incident response talkgroups are available for use in incidents anywhere the ARMER system provides geographic coverage regardless of incident size or scale. Interoperability incidents may be localized or dispersed in area. Participating incident personnel and resources may be localized, regional, statewide or national. Incidents may be pre-planned or emergent in nature.

Secondary Intended Use

On a secondary basis, if other talk groups are not available, the shared statewide incident response talkgroups may be used for day to day and task force type interoperability requirements among multiple agencies. Use for major incident exercises and drills is encouraged.

Non-intended Use

The statewide talkgroups are not to be used for daily routine operations.

Priorities for Use & Multiple Incidents

In the event multiple interoperability incidents occur simultaneously exhausting the shared statewide incident response talkgroups, assignment of STAC, ETAC, FTAC, and LTAC talkgroups in incident radio communications plans will be prioritized for: (1) mutual aid incidents, and (2) those incidents involving resources spanning multiple regions. Secondary use and localized or single region mutual aid incidents initially assigned to shared statewide incident response talkgroups should be reassigned to regional or local coordination talk groups such as the regional PTACs and ATACs. This reassignment will be coordinated between the effected incident commanders and dispatch centers controlling the incidents.

Console Resource Requirements and Patching

Integrated ARMER dispatch consoles shall have the STACs and the appropriate service branch talk groups in the console configuration available for patching. In order to meet the communications needs for an event, the STAC, ETAC, FTAC, and LTAC talkgroups may be patched to:

- Conventional RF resources, such as VHF, UHF, etc.
- Private agency talkgroups, such as dispatch mains, tactical talkgroups, pools etc.
- Patches between the ETAC, FTAC, and LTAC talkgroups to bridge service branches together when STACs are fully allocated.

- Patches between the ETAC, FTAC, and LTAC talkgroups and regional PTACs and ATACs, although this would not be preferred as a method of resolving communications needs because it reduces the number of talk groups available for an incident.

Assignment Tracking
The "Status Board" application on dispatch consoles shall be used to manage and track assignment of the statewide incident response talkgroup resources. Use of the NIMS/ ICS-205 Incident Radio Communications Plan form attached to this Standard is highly recommended to assist with assignment tracking for pre-planned incidents, incidents utilizing more than one of the statewide talkgroups, and for incidents of long duration.

Implementation Deadline
The four STAC talkgroups and the four associated public safety service branch statewide talkgroups (ETAC, FTAC, and LTAC) must be programmed into all corresponding service branch radios on the **ARMER system by January 1, 2008, or have an exception report and approved variance on file with the Statewide Radio Board.**

Standardized Zone Configuration
To facilitate uniform field access to the shared statewide incident response talkgroups it is **STRONGLY ENCOURAGED** that all user subscriber radios be programmed to include the following standardized "Incident Command Zone" or "ICS Zone". The service branch specific ICS Zone must be programmed into all corresponding service branch radios on the **ARMER system by January 1, 2008, or have an exception report on file with the Statewide Radio Board.**

STANDARDIZED ARMER SYSTEMWIDE INCIDENT COMMAND ZONE FOR MAJOR INCIDENT RESPONSE COORDINATION

POS	LAW ENFORCEMENT	EMS	FIRE	PUBLIC SERVICE
1	*LOC CHOICE	*LOC CHOICE	*LOC CHOICE	*LOC CHOICE
2	L-TAC1	E-TAC1	F-TAC1	**A-TAC1
3	L-TAC2	E-TAC2	F-TAC2	**A-TAC2
4	L-TAC3	E-TAC3	F-TAC3	**A-TAC3
5	L-TAC4	E-TAC4	F-TAC4	**A-TAC4
6	S-TAC1	S-TAC1	S-TAC1	S-TAC1
7	S-TAC2	S-TAC2	S-TAC2	S-TAC2
8	S-TAC3	S-TAC3	S-TAC3	S-TAC3
9	S-TAC4	S-TAC4	S-TAC4	S-TAC4
10	**P-TAC1	**P-TAC1	**P-TAC1	LOC CH/ BLANK
11	**P-TAC2	**P-TAC2	**P-TAC2	LOC CH/ BLANK
12	**P-TAC3	**P-TAC3	**P-TAC3	LOC CH/ BLANK
13	**P-TAC4	**P-TAC4	**P-TAC4	LOC CH/ BLANK
14	LOC CH/ BLANK	LOC CH/ BLANK	LOC CH/ BLANK	LOC CH/ BLANK
15	P-SOA-1	P-SOA-1	P-SOA-1	LOC CH/ BLANK
16	A-SOA-1	A-SOA-1	A-SOA-1	A-SOA-1

* TYPICALLY USER'S DISPATCH MAIN
**REGIONAL VERSION OF THIS TALKGROUP

Zone Name Requirement
The "Incident Command Zone" or "ICS Zone" shall be designated with the prefix "IC" in all display radios.

Zone Location in Radio Recommendation
It is **highly recommended** that the ICS Zone be located immediately adjacent to (either above or below) the users primary day to day zone in display radios. It is highly recommended that the IC Zone be located in the C Zone in non-display radios with an A/B/C zone selector switch.

Service Branch Talk Groups also in Primary Zone Recommendation
If there is space available it is recommended that the four service branch specific statewide talkgroups also be located in the respective user's primary day to day zone, (typically zone A or zone 1) in addition to the ICS Zone.

Quick Reference Guide Requirement
The standardized quick reference guide attached at the end of this standard shall be issued to all users of the ARMER system.

Multi Group Prohibition
None of the STAC, ETAC, FTAC, and LTAC talkgroups shall be part of any multi-group.

Recording
The STAC, ETAC, FTAC, and LTAC recording procedure falls under Section 3.1h – Recording Interagency Talkgroups.

5. Standardized Procedure:

Notification
When a statewide talkgroup resource is needed, the requesting agency will contact the dispatch center controlling the incident, or Incident Commander as appropriate, to have the next preferred available system wide talkgroup assigned.

The system wide talkgroups may either be used directly, or be patched to other resources to meet the communications needs of an event.

Order of Use
The usage of STAC, ETAC, FTAC, and LTAC talkgroups for **PREPLANNED NON-EMERGENCY** interoperability events should be _TAC 4, 3, 2, 1 in that order. The usage of STAC, ETAC, FTAC, and LTAC talkgroups for **UNPLANNED EMERGENCY** interoperability events should be _TAC 1, 2, 3, 4 in that order.

Unit Identification
When operating on the shared statewide incident response talkgroups, users should initially identify in the following manner using plain English: Agency name, followed by

service branch or function designation, followed by call sign or unit number. Examples: "North EMS 512", "Elk River Police 512", "Washington County Public Works 512", "State Patrol 512", etc. Once established, ongoing communications between the same units may be shortened.

<u>Use of 10-Codes and Acronyms</u>
The use of 10-codes, signals, unique acronyms, and other codes should not be used on the statewide incident response talkgroups because there is no standardized set of codes. Plain English should be used in all cases.

<u>Patched Mutual Aid Channels</u>
Public Safety based conventional resources such as "MINSEF, Fire etc." can only be patched to the Public Safety pool talkgroups or the preferred soft patch talkgroup. The rules for externally governed resources still apply in the use of these resources while patched to the STAC, ETAC, FTAC, and LTAC talkgroups.

<u>Termination of Use</u>
At the end of the event the initiating dispatch center will remove any patches that were placed for the event "if any", and clear the status, so the other dispatchers will know this resource is available for use.

6. Management
Dispatch Center Managers & Supervisors for agencies on the statewide ARMER system, Incident Commanders and ICS Communication Unit Leaders shall insure that the policy and procedure for usage and assignment of the STAC, ETAC, FTAC, and LTAC talkgroups be followed.

The MnDOT System Administrator shall be responsible for the Status Board application.

Dispatch center operators and ICS Communication Unit Leaders shall receive initial training and periodic refresher training on the use of this procedure.

<u>Variances and Exceptions</u>
The Statewide Radio Board shall review all variance requests and/or exception reports and provide a written response to the requesting agency.

The following radios are eligible for a categorical exception of the talkgroup and/or Incident Command Zone requirement:

- Receive only radios.
- Control station radios configured as single talk group stations.
- Radios assigned to personnel or vehicles that are not first responders and are not part of a response plan to emergencies or disasters in any way such as internal building facilities maintenance, internal use in jails, etc.
- Radios that do not have operator selectable talkgroups such as Metro Transit buses, etc.
- Radios used by private contractors performing construction and other related services

under contract to a governmental entity.

Entities applying for a categorical exception need only to submit an exception report. Exception reports shall include:

- An inventory of the quantity and typical duty assignment of the radios for which the variance is requested, and
- A list indicating which, if any, regional and statewide shared talk groups are programmed into each radio, or group of identical radios, including zone and channel slot information.

Requests for variance shall include an exception report and demonstrate that the inclusion of the minimum required statewide incident response talkgroups and/or the required ICS Zone is either:

- Operationally undesired, or
- Burdensome in some other way.

Management and Distribution of Exception Reports

The State of Minnesota ARMER Interoperability Coordinator will be responsible for acquiring, updating, organizing and distributing exception reports.

The exception reports will be distributed to holders of the State Emergency Communications Plan and the Metro Region Tactical Interoperability Communications Plan for use in incident response planning. Exception reports will also be made available to regional radio boards, emergency management directors, designated communications unit leaders and other individuals responsible for interoperable communications activities.

INCIDENT RADIO COMMUNICATIONS PLAN (Hand Print or Type & Print as MS Word Doc)	1. Incident Name/ Location	2. Date/ Time Prepared/ Updated	3. Operational Period Date/ Time

4. Basic Radio Channel & Talk Group Utilization					
Radio Type/Cache/ Band - VHF/ 800, etc.	Channel and/or Talk Group Name	Function - LE/ Fire/ EMS/ Pub Wks, Transit, etc.	Frequency/ Tone/ Talk Group ID	Operational Assignment Division, Group, Unit	Remarks Gateway/ Patches/ Portable Repeaters, etc.
EXAMPLE ARMER 800 MHZ DIGITAL	EXAMPLE E-TAC1	EXAMPLE EMS	EXAMPLE $8CC (80002252)	EXAMPLE EMS BRANCH COMMAND NET	EXAMPLE COMMAND & CONTROL OF EMS UNIT LEADERS (TRIAGE, TRANSPORT & STAGING) BY EMS BRANCH DIRECTOR – COMMS COORDINATED BY ICC

5. Prepared By

Agency: _____ COML: _____ Approved By: _____

6. Continuation Pages

Page Number _____ of _____   Note: Frequencies are Listed From a Mobile/ Portable Perspective

ARMER EXCEPTION REPORT
NON-STANDARDIZED ICS ZONE CONFIGURATION

Agency Name & Address: _____

Contact Name: _____ Phone: _____ Email: _____

Date: _____ Number of radios with this configuration: Portables _____ Mobiles: _____

Typical duty assignment using this configuration: _____

Instructions: Fill in the zone letter/name/number at the top of the column and then fill in the channel position boxes to indicate the location of the following talkgroups: LTAC1-4, ETAC1-4, FTAC1-4, STAC1-4, Regional PTAC1-4 and Regional ATAC1-4.

Fill out a separate form for each different variation of radio template. Submit to the Minnesota ARMER office.

Pos	ZONE - ___	ZONE - ___	ZONE - ___	ZONE - ___	ZONE - ___	ZONE - ___	ZONE - ___	ZONE - ___
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

RADIO "IC" ZONE

STANDARDIZED ARMER SYSTEMWIDE INCIDENT COMMAND ZONE FOR MAJOR INCIDENT RESPONSE COORDINATION

POS	LAW ENFORCEMENT	EMS	FIRE	PUBLIC SERVICE
1	*LOC CHOICE	*LOC CHOICE	*LOC CHOICE	*LOC CHOICE
2	L-TAC1	E-TAC1	F-TAC1	**A-TAC1
3	L-TAC2	E-TAC2	F-TAC2	**A-TAC2
4	L-TAC3	E-TAC3	F-TAC3	**A-TAC3
5	L-TAC4	E-TAC4	F-TAC4	**A-TAC4
6	S-TAC1	S-TAC1	S-TAC1	S-TAC1
7	S-TAC2	S-TAC2	S-TAC2	S-TAC2
8	S-TAC3	S-TAC3	S-TAC3	S-TAC3
9	S-TAC4	S-TAC4	S-TAC4	S-TAC4
10	**P-TAC1	**P-TAC1	**P-TAC1	LOC CH/ BLANK
11	**P-TAC2	**P-TAC2	**P-TAC2	LOC CH/ BLANK
12	**P-TAC3	**P-TAC3	**P-TAC3	LOC CH/ BLANK
13	**P-TAC4	**P-TAC4	**P-TAC4	LOC CH/ BLANK
14	LOC CH/ BLANK	LOC CH/ BLANK	LOC CH/ BLANK	LOC CH/ BLANK
15	P-SOA-1	P-SOA-1	P-SOA-1	LOC CH/ BLANK
16	A-SOA-1	A-SOA-1	A-SOA-1	A-SOA-1

* TYPICALLY USER'S DISPATCH MAIN
**REGIONAL VERSION OF THIS TALKGROUP

WHEN TO USE

PRIMARY USE
Major mutual aid incidents involving joint response from multiple agencies and/or service branches. Interoperability incidents may be localized or dispersed in area and may be pre-planned or emergent in nature. Participating incident personnel and resources may be localized, regional, statewide or national.

SECONDARY USE
On a secondary basis, if other talk groups are not available, the shared statewide incident response talkgroups may be used for day to day and task force type interoperability requirements among multiple agencies. Use for major incident drills and exercises is encouraged.

NON PERMITTED USE
The statewide talkgroups are not to be used for daily routine operations.

HOW TO USE

ASSIGNMENT OF TALK GROUPS
When a statewide talkgroup resource is needed contact the controlling dispatch center, or the Incident Commander as appropriate, to have the next available system wide talkgroup assigned based on the following order of use.

ORDER OF USE FOR EMERGENCIES
The usage of STAC, ETAC, FTAC, and LTAC talkgroups for emergencies should be:
_TAC 1, 2, 3, 4 in that order.

ORDER OF USE FOR PREPLANNED EVENTS
The usage of STAC, ETAC, FTAC, and LTAC talkgroups for preplanned events should be:
_TAC 4, 3, 2, 1 in that order.

TRACKING
Dispatch centers on the ARMER system will keep track of assignments on a "status board" window on their dispatch consoles.

HOW TO FIND

ZONE NAME
The "Incident Command Zone" or "ICS Zone" shall be designated with the prefix "IC" in all display radios.

ZONE LOCATION IN RADIO
It is highly recommended that the IC Zone be located immediately adjacent to (either above or below) the users primary day to day zone in display radios. It is highly recommended that the IC Zone be located in the C Zone in non-display radios with an A/B/C zone selector switch.

SERVICE BRANCH TALK GROUPS
If there is space available it is recommended that the four service branch specific statewide talkgroups also be located in the respective users primary day to day zone, (typically zone A or zone 1) in addition to the ICS Zone.

PLAIN ENGLISH

UNIT IDENTIFICATION
When operating on the shared statewide incident response talkgroups, users should initially identify in the following manner using plain English:

Agency name, followed by service branch or function designation, followed by call sign or unit number. Examples: "North EMS 512", "Elk River Police 512", "Washington County Public Works 512", "State Patrol 512", etc.

Once established, ongoing communications between the same units may be shortened.

USE OF 10-CODES AND ACRONYMS
The use of 10-codes, signals, unique acronyms, and other codes should not be used on the statewide incident response talkgroups because there is no standardized set of codes. Plain English should be used in all cases.

PRIORITY OF USE

MULTIPLE INCIDENTS
In the event multiple interoperability incidents occur simultaneously exhausting the shared statewide incident response talkgroups, assignment of STAC, ETAC, FTAC, and LTAC talkgroups in incident radio communications plans will be prioritized for those incidents involving resources spanning multiple regions.

Localized or single region incidents initially assigned to shared statewide incident response talkgroups should be reassigned to regional or local coordination talk groups such as the regional PTACs and ATACs.

INCIDENT RADIO COMMUNICATIONS PLAN
Major incidents should have a written radio plan (ICS-205) that keeps track of talk groups, mutual aid channels, swap radios, cross patches and other communications resource assignments.