STATEWIDE EMERGENCY COMMUNICATIONS BOARD

FINANCE COMMITTEE

October 13, 2016
9:00 a.m.
Chair: Cari Gerlicher
Conference Call
Dial in: 1-888-742-5095
Code: 2786437892#

MEETING AGENDA

Call Meeting to Order

Approval of Agenda

Approval of Previous Meeting's Minutes

- September Special Meeting
- September Meeting

New Business

- SOAR Change Management Request (Jim Stromberg) ***DISCUSSION ITEM***
- Additional Encrypted L-TAC Talkgroups (Jim Stromberg) ***DISCUSSION ITEM***

Old Business

Other Business/Discussion

Adjourn

STATEWIDE EMERGENCY COMMUNICATIONS BOARD

FINANCE COMMITTEE

September 19, 2015
Special Meeting
Conference Call; Dial-in: 1-888-742-5095; Code: 2786437892#

MEETING MINUTES

Member/Alternate
Cari Gerlicher, Chair – MN Police Chiefs Association
Mukhtar Thakur/Tim Lee – Director, MnDOT-OEC
Blake Huffman/Randy Larson/Jill Rohret, MESB
Ron Antony – SW ECB
Jack Swanson – NW ECB
Micah Myers, Vice Chair – Central MN ESB
*Members attending are marked with yellow highlight.

Guests:

Name	**Representing**
Jackie Mines	DPS/ECN
Carol Salmon	DPS/ECN
Troy Tretter	MESB

CALL TO ORDER

Chair Cari Gerlicher calls the meeting to order at 12:03.

APPROVAL OF AGENDA

Jack Swanson makes a motion to discuss the item of early ARMER bond payoff.
Micah Myers seconds the motion.
Motion carries.

ACTION ITEMS

Jackie Mines introduces the item of early ARMER bond payoff, as submitted in the meeting materials. She notes that the urgency of this meeting has to do with the Minnesota Management and Budget (MMB) timelines regarding other bonds that MMB is selling.

Mines relays that one of the bond is callable in December. At that time and not before, we can open up all of the bonds for reissuance or sale if we so desire. One of the goals of the SECB is to pursue early ARMER bond payoff to free up money for future needs. The current bonds go out to the year 2026. Mines has been working with the

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MMB towards achieving this initiative. The bond that is callable now gives the opportunity to pay that one off early and refund the rest of the bonds at a more aggressive interest rate using Treasury bonds as opposed to market bonds. The advantages to pursuing this at this time are that the current interest rate is at an average of 4.8% and the new interest rate would be 1.3% saving the state money over the life of the bonds. The net savings from this refinance on the remainder of the bonds is $7.66 Million. Additionally, the bonds will be paid down with the majority of the dollars sent to MMB rather than only a portion holding the rest in reserve which leaves us a very large balance at the end of the payoff. Currently the terms of the bonds to the bond holders is that we pay $23 M annually holding in reserve $10 M in case we should default on the bonds. This causes us to have a large reserve at the end of the bond term. It would be prudent not to have a large reserve with MMB at the end of the bond payments. Refunding with Treasury bonds allows us to pay a more aggressive amount over the next five years and pay them off earlier. Refinancing with Treasury Bonds also protects us from the vulnerability of the market.

There will be a savings of $23 Million a year for ECN from the year 2021 to 2025 saving an additional $115 Million and allowing us to either use that money for other projects or reduce the 911 fee.

Swanson makes a motion to pay down the bonds and refinance what is left into a lower interest rate Treasure Bond.

Myers seconds the motion.

Discussion:

Swanson asks what other projects would be considered for funding with this savings.

Mines responds that there are not specific projects in mind at this time and gives examples of what some potential future needs might be. She notes the rapid growth of technology and the changing landscape of NG 9-1-1, wireless broadband for public safety and radio networks and costs that may be associated with these developments.

Motion carries.

ADJOURN

Myers makes a motion to adjourn.
Swanson seconds the motion.
Motion carries.

Meeting is adjourned at 12:14 p.m.

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STATEWIDE EMERGENCY COMMUNICATIONS BOARD

FINANCE COMMITTEE

September 8, 2015
Conference Call; Dial-in: 1-888-742-5095; Code: 2786437892#

MEETING MINUTES

Member/Alternate
Cari Gerlicher, Chair – MN Police Chiefs Association
Mukhtar Thakur/Tim Lee – Director, MnDOT-OEC
Blake Huffman/Randy Larson/Jill Rohret, MESB
Ron Antony – SW ECB
Jack Swanson – NW ECB
Micah Myers, Vice Chair – Central MN ESB
*Members attending are marked with yellow highlight.

Guests:

Name	Representing
Jackie Mines	DPS/ECN
Carol Salmon	DPS/ECN
Troy Tretter	MESB

CALL TO ORDER

Chair Cari Gerlicher calls the meeting to order at 9:02 a.m.

APPROVAL OF AGENDA

Micah Myers makes a motion to approve the agenda.
Jill Rohret seconds the motion.
Motion carries.

APPROVAL OF PREVIOUS MEETING'S MINUTES

Chair asks for a motion to approve the June meeting minutes.

Jack Swanson makes a motion to approve the June meeting minutes.
Myers seconds the motion.
Motion carries.

ACTION ITEMS

ARMER MIGRATION GRANT FOR NORMAN COUNTY

Jackie Mines introduces a request from ECN to provide an ARMER migration grant to Norman County in the

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amount of $29, 458.87, as submitted in the meeting materials.

Norman County has filed an ARMER Participation Plan with the SECB. Funding for the grant will be taken from money left in the FY2016 ARMER budget. The Grants Workgroup under the Finance Committee approved the grant.

Swanson makes a motion to approve the Norman County ARMER migration grant request as presented in the meeting materials.
Rohret seconds the motion.
Motion carries.

2015 SHSP RE-ALLOCATION OF FUNDS

Mines introduces the item as presented in the meeting materials. She reports that the Grants Workgroup decided that if regions could not spend granted funds by July 15 that the funds would revert back to the state. The goal was to reallocate the funds to those who did not get funded for their original request or to make it available to other regions who have additional requests.

Dustin Leslie says that so far the Metro, Central, Southwest and South Central regions have reported back and ECN is waiting to hear from the other regions.

Mines reports that the Southwest and South Central regions have turned money back. We checked with the Southwest about their original request that did not get funded to see if they wanted to fund that. The region put that request on hold and asked for a Yellow Medicine County BDA project. This would be a matching grant of $6500. The Northeast was not funded for a MCC7500 console and software for the Pike Lake backup emergency center so the region requested a matching grant of $27,952.45 for that. The Grants Workgroup recommends these two grants.

Ron Antony makes a motion to approve the reallocation of grant funds.
Myers seconds the motion.

Discussion about ways to clarify the application form. There will be a grant training coming up which may help with consistency in filling out the applications.

Discussion about how the decision was made to recommend these projects. This was the first year that there was a request to return money that was not spent for its allocated project by the July deadline. The process of reallocation of these funds is new and being worked out. The Grants Workgroup reviewed the requests and recommends these two grants.

Motion carries.

2017 – 2018 SECB GRANT

Mines introduces a request from ECN to create a new 2017/2018 SECB Grant, as presented in the meeting materials. She proposes using money left over from FY2016 budgets and some projected leftover funds from the FY2017 SECB budget. The funds, as presented in the meeting materials, would consist of the remaining SECB budget for FY2016 of $331,710, the remaining budget dollars leftover from FY2016 in the 9-1-1 allocation of $418,289, and the projected remaining FY2017 SECB allocation of $300,000. If approved, the Grants Workgroup would meet to determine what the priorities should be. The next step would be that after grant training is completed, regions would be asked to apply for the grant and grants would be awarded on a competitive basis.

Discussion about what types of projects the grants could be used for. The priorities would be around the SECB initiatives. One example is the initiative of deploying Text-to-9-1-1 and having the GIS project underway. There are counties that will need to put together a GIS data base and clean up areas that are not properly addressed and will

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need additional support to get this done, for example There will likely to be training and exercises and conference attendance. Regions will have specific needs.

Discussion about the importance of the upcoming grant training workshop and dates that will work best. It is recommended that three people from each region attend and two are required (the grants administrator and the RAC Chair). The workshop will provide education and training to help with potential future audits and will be required for regions to receive funds.

Swanson makes a motion to approve a 2017/2018 SECB Grant as proposed.
Antony seconds the motion.
Motion carries.

DISCUSSION ITEMS

GRANT TRAINING AND REVIEW OF MATERIALS

Mines introduces the grant training materials for information and review and invites feedback. ECN proposes some changes to the grant process to better protect counties, regions and the ECN from any possible audit irregularities. Mines reviews the recommended changes, as presented in the meeting materials:

1) Each grant project request will require a Proof of Progress letter at the halfway point to see if the project is on target. If not on target for completion, the money will be automatically returned to ECN for redistribution;

2) When grant dollars are returned from a region, any new project requests will be considered *after* any original project requests that were approved but not funded due to lack of funds;

3) There will be an annual mandatory in-person training for grant funding requiring two people from each region. If a region cannot attend, it will not be eligible for grants until training is completed. ECN will be willing to attend meetings at regional invitation to explain the process if needed so that more counties have an understanding of the requirements.

4) ECN will adopt the HSEM grant monitoring process with in-person compliance checks to all regions over two years and going forward.

Mines reviews the FY2015 State Homeland Security Program Grant Guidance, as submitted in the meeting materials.

Mines invites feedback on the process and materials. She notes that one of the reasons to bring everyone together for the training is so that grants administrators and others can share their best practices with each other.

Chair Gerlicher adds that the federal government is getting much stricter on auditing. She emphasizes that this is a team approach with HSEM and to be good stewards of the grant money that has been given. She adds that if anyone has great ideas that have been successful in a region to send those to Mines so they can be added to the materials.

ADJOURN

Myers makes a motion to adjourn.
Swanson seconds the motion.
Motion carries.

Meeting is adjourned at 9:57 a.m.

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To:	John Anderson (System Managers Group)
	Tim Lee (MnDOT)
	SECB Finance Committee
	Dewey Johnson (Northeast Regional Advisory Committee)
	Neil Dolan (Northwest Regional Advisory Committee)
	Micah Meyers (Central Regional Advisory Committee)
	Ulie Seal (Metropolitan Emergency Services Board)
	Bill Flatten (Southwest Regional Advisory Committee)
	Tim Mohr (South Central Regional Advisory Committee)
	Dave Pike (Southeast Regional Advisory Committee)
From:	Jim Stromberg, ARMER Program Manager
Date:	September 8, 2016
Subject:	Scene of Action Repeater (SOAR) Change Management Request

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On October 13, 2015, Kandiyohi and Stevens Counties requested of the OTC that the SECB consider changing the way one of Minnesota's Scene of Action (SOA) channels is used (attached). The goal of the request was to enhance ARMER coverage in rural communities where in-building ARMER coverage suffers by repurposing a statewide simplex "Scene of Action" channel to be used as a repeated channel. The request has come to be known as SOAR (Scene of Action Repeater).

The Operations and Technical Committee (OTC) and the Interoperability Committee (IOC) reviewed the SOAR proposal and have identified SOAR as both a major operational and a major technical proposal. The OTC and the IOC engaged the Change Management process prescribed in Change Management Standards, 1.5.2 and 1.8.0.

The attached report and the points below summarize the proposal, to date.

- The OTC created a workgroup that later submitted a report (attached) recommending that 800 MHz National Interoperability Channels be considered instead of SOAs.
- The OTC guided the Workgroup to draft a standard in which both simplex SOAs and 800 MHz National Interoperability Channels be considered as options. The OTC also asked the IOC to formally consider if this was an approved use of the 800 MHz National Interoperability Channels.
- The IOC approved using 800 MHz National Interoperability Channels in this configuration for interoperability purposes and asked that a draft standard also be brought to it for review.

- The workgroup drafted a standard (attached) and renamed SOAR to *Conventional Resource ARMER Enhancement*.
- Per the Change Management standards, the OTC recommended that the SOAR issue be forwarded to MnDOT, the System Managers Group, the SECB Finance Committee, and each of the Emergency Communications/Services Board regions for reviews.

Will you please present the SOAR Change Management issue and the attached documents to your groups at your next meetings and provide written feedback to me shortly afterward? When your comments are received, I will present them and the draft standard to the OTC and IOC.

I am available for your questions by email (james.stromberg@state.mn.us) or telephone (651-201-7557).

Allied Radio Matrix for Emergency Response (ARMER)

Change Proposal

1. Administrative Information:

Type of Change (Technical or Operational): Both Technical and Operational

Date Submitted: 01/12/16

Submitter (e.g., Regional Radio Board or state agency): Central Mn Regional Radio Board

Change Sponsor (Individual) Contact Information: Central MN RAC & Stevens County

Summary of proposed change(s): Local use of 8SOA3 during an emergency, training, exercises or special events.

Weak and no coverage areas that are low traffic, multi structure with poor or no portable coverage from the ARMER system will benefit from a SOAR. These areas are small in size and with too many structures to warrant an indoor BDA, and where Outdoor BDA will not penetrate the structures, yet these areas are critical enough for indoor coverage for emergency responders.

2. Existing SRB standards impacted:

New Standard written and included.

CM- 3.15.0 How to Use Scene of Action (SOA)

State- 3.15.0 - Use of 700 MHz and 800 MHz Statewide Scene of Action (SOA) Channels *effective 11/22/13*

3.24 RF Control Stations?

3.25.0 - Radio to Radio Cross Band Repeaters?

3. Scope of Change:

Impact on users (e.g., majority of users, minority of users, number of counties/regions): Potentially all

Impact on the placement of resources in communications equipment (e.g., upgrades):

The footprint of the SOAR must be contained to address immediate poor coverage area and not over extend beyond the intended coverage area.

Impact on operational procedures (e.g., changes to operational standards): New Standard (attached)

Impact on user training (e.g., training required for compliance):

Users would need to be instructed on where the talkgroup is located in their radio, how to use it, and informed of any pertinent ARMER standards. SOAR procedures will need to be addressed in the training of all personnel operating within the SOAR system. Training will cover the different on scene procedures utilized by all users. It is critical that all users are aware of the rules and procedures and limitation in utilizing the SOAR channel.

Impact on reprogramming or configuration of end-user equipment:

Subscribers: Use of SOA 3 as a repeater pair 853.950/808.950 with a NAC code of 293 operating in Project 25 Phase 1 and not utilizing any Encryption.

The need or necessity for the SOAR channel to be programmed into radios will be determined by each agency. If an agency opts to not place this channel into their radios they will be responsible for any limitations on their ability to communicate within the SOAR coverage area.

Consoles: Control Stations currently set up for Site Trunking would need to be reprogrammed (if made mandatory).

Other equipment:

4. Existing deficiencies, problems, needs addressed by the proposed changes:

The Hancock School, Hancock Police Department, Chokio Fire Hall, Chokio School and other buildings within these cities have limited to no indoor coverage. A SOAR repeater is designed for radio to radio coverage in a poor or no coverage area of the ARMER radio system, also giving the radio one talk group on the ARMER system. With a use of a gateway the SOAR would tie to the ARMER talk group, effectively improving coverage for one talk group and also increasing the radio to radio coverage in the affected area.

Once on the ARMER system a local dispatch agency will control and direct the traffic from the SOAR repeater.

5. **Expected improvements & benefits resulting from the change:**
   Interoperability

6. **Proposed implementation & transition plan including timeline, milestones and training:**

Start and End Date: Start date could begin immediately.

Description of Implementation Plan: Stevens County is in line for a 2016 Central MN grant, the Stevens County Board of Commissioners has approved this grant and the 50 % match required.

After OTC/Change Management approval: Application for a SOAR will be submitted from the agency to the CM ESB for approval. Application will include.

- Letter explaining reason for SOAR
- Intended coverage area, how they will limit coverage foot print
- Agency who will be responsible for SOAR and contact information
- FCC form 601, schedule D, schedule H showing SOAR location and coverage area will be attached with the application.
- Other SOAR's within a 30 air mile radius
- A Valid FCC License has been obtained

Local System Administrator will be responsible for ensuring that users follow the standards, protocol and procedures.

- Training
  SOAR procedures will need to be addressed in the training of all personnel operating within the SOAR system. Training will cover the different on scene procedures utilized by all users. It is critical that all users are aware of the rules and procedures and limitation in utilizing the SOAR channel.

7. **Preliminary assessments which have been completed (documentation attached):**

System Tested:

We have used a Quantar 800Mhz repeater with an antenna system low enough to give us town coverage, yet contain the signal to the areas that need indoor coverage and a small radius around the town.

A gateway system, consisting of two mobile radios, one on the 8TAC94 and the other on a County ARMER talk group as the interface, this was tested in Hancock and Atwater and both operational.

Test Results:

In both cases (Atwater and Hancock) we found no internal buildings that we could not penetrate using the 8TAC94 repeater. The Dispatch centers choose to use a lower County interop talk group which dispatch would monitor, and patch when required. All users inside and outside of the structures understand what channels and "talk groups" to use.

Audio Delays:

A concern of ours was if the audio delays in our system design would cause users on the 8TAC94, ARMER subscriber radios and dispatchers too much delay and make the system unusable. We did not find this to be the case, technically there is a slight delay, but not much more than what users experienced on a VHF repeater system.

8. **List of Attached proposed new or revised Standards, Plans or Best Practices Guides:** Proposed Standard Included

9. **Other Attachments:**

Draft Standard, Letter to OTC Dated 09/23/15 & Letter Dated 05/29/15

10. Tracking and Approvals:

Submitter Approval: 01-11-2016

Signature Date

DECN Receipt:

Signature Date

OTC/IOC Determination of Need:

Signature Date

MnDOT/ECN Approval:

Signature Date

OTC/IOC Approval of Assessments:

Signature Date

Finance Committee Approval:
(if required)

Signature Date

Final SRB Approval:

Signature Date

Change Manage Progress Form
Scene of Action Repeater (SOAR)

Summary of Suggestion
Request to use conventional channel SOA-3 as a repeated channel to provide a low cost coverage solution in rural areas where in-building ARMER coverage suffers and without demand or resources for ARMER enhancements.

Change Sponsor *(entity)*
Central Emergency Communications Board for Stevens County.

Sponsor's Representative (person)
Micah Meyers

First Introduction to an OTC or IOC
October 13, 2015

Standard(s) Impacted
3.15.0 (Use of 700 MHz and 800 MHz Statewide Scene of Action (SOA) Channels)
3.24.0 (RF Control Stations)?
3.25.0 (Radio to Radio Cross Band Repeaters)?
3.33.3

Technical/System Change Suggestion

OTC Decision about whether Technical/System Change Suggestion would be a Major or Minor Change (if applicable)	
Major	Minor
April 12, 2016: OTC identified this as a Major Change Management request.	← Identified as a Major Change

If a Major Technical/System Change	If a Minor Technical/System Change
OTC Review of Necessity and Substantial Benefit If YES, move on to MnDOT If No, return to Proponent	MnDOT System Administrator's Recommendation
May 10, 2016: OTC asked Al Fjerstad to form and lead a workgroup to explore this question. The workgroup was authorized to move this item on to MnDOT and System Admins for input. June 14, 2016: Al reported to OTC that there was a poor response to his request for workgroup members. OTC guided that he try again and then move forward. July 18, 2016: Al reported he was too busy at work to follow up. Jim will get group formed to review the "necessity and benefit" of this proposal. Al provided Workgroup membership info to Jim. July 28, 2016 Workgroup met and recommended using an 8TAC instead of an SOA. Memo drafted and sent to OTC. August 9, 2016	n/a

Change Manage Progress Form
Scene of Action Repeater (SOAR)

SOAR discussed at OTC. Suggestion received that a simplex SOA be allowed as an option as well as repeated 8TACs. OTC supported using 8TACs and simplex SOAs. Tim Lee suggested that IOC should formally endorse this use of 8TACs. Motion to move to IOC for further consideration. Also included in motion was to send to MnDOT for Technical Review, SMG for System Admin review, regions, and Finance Committee. Recommended that a Standard be drafted to address this topic. In progress.	

If a Major Technical/System Change
MnDOT Technical Review
September 8, 2016: Sent to Tim Lee by email.

If a Major Technical/System Change
System Administrator Review
September 8, 2016: Sent to John Anderson by email.

If a Major Technical/System Change
Regional Input
September 8, 2016: Sent to all RAC Chairs by email.

If a Major Technical/System Change
Finance Committee Review and, if applicable, Regional Concurrence in Local Share
September 8, 2016: Carol asked to add to Finance Cmte agenda.

If a Major Technical/System Change	If a Minor Technical/System Change
OTC Review and Recommendations	If a Standard Revision is Required, OTC Review and Recommendations
	n/a

If a Major Technical/System Change	If a Minor Technical/System Change
SECB Decision	MnDOT Decision
	n/a

Change Manage Progress Form
Scene of Action Repeater (SOAR)

Operational/SOP Change Suggestion

IOC Decision about whether Operational/SOP Change Suggestion would be a Major or Minor Change (if applicable)	
Major	Minor
May 17, 2016: Interop Cmte identified this as a MAJOR change and empowered the workgroup to sort out the next steps, per standard. May 18, 2016: Email sent to Al advising that the IOC wants to add two people to the workgroup and offering assistance if those volunteers do not become apparent. Workgroup should consider • Comm Truck additions • Ability to be encrypted	n/a

If a Major Operational/SOP Change	If a Minor Operational/SOP Change
IOC Review of Necessity and Substantial Benefit If YES, IOC Determines Change Proposal Review Requirements If No, return to Proponent	ECN Recommendations
May 18, 2016: This should be decided by the workgroup.	

If a Major Operational/SOP Change
IOC Requirements for Assessments and Focus Groups
August 16, 2016: Workgroup already exists and is working on standard. No objections to moving forward with using simplex SOAs and repeated 8TACs. Workgroup should bring standard back to IOC for approval.

If a Major Operational/SOP Change
ECN Report

If a Major Operational/SOP Change
Facilitator Reports
See workgroup info.

If a Major Operational/SOP Change
MnDOT Report
September 8, 2016: Sent to Tim Lee by email.

Change Manage Progress Form

Scene of Action Repeater (SOAR)

If a Major Operational/SOP Change
ECN Report

If a Major Operational/SOP Change
Reports and Assessments Circulated to Regions (ECBs, RAC, O&Os)

If a Major Operational/SOP Change
Finance Committee Review and, if applicable, Regional Concurrence in Local Share

If a Major Operational/SOP Change	If a Minor Operational/SOP Change
IOC Review and Recommendations	IOC Review and Recommendations

If a Major Operational/SOP Change	If a Minor Operational/SOP Change
SECB Decision	SECB Decision

To: SECB Operations and Technical Committee (OTC)
From: Jim Stromberg, ARMER Program Manager
Date: July 28, 2016
Subject: SOAR (Scene of Action Repeater) Change Management Request

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At the April 2016 OTC Committee meeting, the Committee identified the Scene of Action Repeater (SOAR) request as a Major Change Management item. At the May 2016 meeting, the Committee assigned Al Fjerstad to lead a workgroup to explore this issue. Due to an unforeseen workload, Al was unable to convene the workgroup he had assembled and I relieved him by moderating the workgroup's first and only conference call.

The SOAR workgroup was made up of the following persons and met by telephone on July 28, 2016.

Dave Sisser	Rick Freshwater
Monte Fronk	Bill Flatten
Chris Kummer	Dona Greiner
Mike Peterson	Rod Olson

I charged the workgroup with reviewing the technical merits of the SOAR proposal and with recommending the next steps in the Change Management process.

Workgroup members reported that they were current on the topic but welcomed a summary update from Dave Sisser. The communities of Atwater and Hancock in Central Minnesota do not enjoy good in-building, portable-radio ARMER coverage. Outdoor and indoor BDA solutions were not practical solutions so they sought an alternative. The solution they identified was to install a local repeater using conventional 800 MHz frequencies and patching to a dedicated ARMER talkgroup. Testing using a National Interoperability Channel proved successful. The request of the OTC was to use a Scene of Action (SOA) channel and its repeater pair to facilitate a permanent solution. There was general agreement from the workgroup that in-building coverage was an issue in some rural communities and that an 800 MHz conventional repeater may be a low cost solution.

There was some reluctance to moving forward using a repeated SOA channel. Two alternative solutions were considered. Concerns related to the coverage footprint and the inability for a user on the ARMER end of the connection to monitor the unrepeated SOA side of the connection before transmitting.

The first alternative considered was patching a simplex SOA to a dedicated talkgroup rather than using a repeater. With this solution there was a concern that a simplex channel may not provide adequate coverage.

The second alternative solution was to utilize a National Interoperability Channel in lieu of the SOA. This solution was deemed technically and financially very similar to the original SOA solution and was widely accepted by the workgroup. The concern about being able to monitor the channel for use prior to transmitting was mitigated by the fact that 800 MHz National Interoperability Channels were dedicated interoperability channels, while SOAs were open to all any ARMER user for any use. The workgroup understood that *interoperability* did not mean that the event has to be an emergency or large in scale and contended that this solution provided for *interoperability*.

Further benefits of this solution include that National Interoperability Channels (8TACs) are already programmed into all ARMER radios so no reprogramming would be necessary. The addition of a local 8TAC repeater enhanced interoperability as a whole. 8TACs may operate at a higher power than SOAs. Because there are four 8TACs available, there is more channel planning flexibility.

It was presumed that the OTC would forward this idea to the Interoperability Committee for consideration. If the OTC and the IOC both approve of utilizing a National Interoperability Channel rather that an SOA channel, the workgroup believed that this issue would no longer warrant review under the Change Management process.

The Workgroup recommended that I report its findings at the next OTC meeting.

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

Document Section 3	**Interoperability Standards**	**Status**: Committee Date: 00/00/00
State Standard Number	**3.47.0**	
Standard Title	**Conventional Resource ARMER Enhancement**	
Date Established	**00/00/00**	**SRB Approval**: 00/00/00
Replaces Document Dated	**00/00/00**	
Date Revised	**00/00/00**	

1. Purpose or Objective

This standard authorizes local system administrators to establish radio patches between conventional RF (radio frequency) resources and dedicated ARMER talkgroups for the purpose of providing radio coverage in specifically-defined areas insufficiently served by the trunked ARMER network.

The options identified in this standard shall be known as *Conventional Resource ARMER Enhancement*.

2. Technical Background

- **Capabilities**

A connection between a strategically-placed gateway device programmed with a conventional channel and bridged to the ARMER network affords radio coverage in areas not well covered by ARMER.

- **Constraints**

The Conventional Resource ARMER Enhancement solutions offered in the standard are lower cost alternatives to more sophisticated options such as Signal Amplifiers (e.g. BDAs). Patching a conventional channel to ARMER comes with a variety of limitations. Among them, the following should be considered:

- Conventional radio channels have limited range.
- The options identified in this standard are meant to enhance significant ARMER coverage deficits but the solution implemented may, itself, be imperfect.
- End users selected to the conventional channel will lose their ability to scan ARMER resources. While radios may be programmed to allow this functionality it is discouraged in standard #2.12.0 because of other technical limitations.
- When using a traditional patch as authorized in this standard, typically only voice is carried between the two systems being bridged. Functions such as emergency buttons and radio aliases may not pass between the systems.

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- Traditional radio bridges create a short delay and may result in clipping of the first portion of a voice transmission. Care must be taken to pause between pushing the push-to-talk button and speaking.
- The conventional channel identified for the patch must be available in user radios.

Technical guidance should be applied before employing a Conventional Resource ARMER Enhancement solution so that emissions, coverage area, technical limitations and training needs are understood.

3. Operational Context

A conventional RF resource may be bridged to ARMER to provide supplemental radio coverage to a geographical area. The gateway device may be either fixed or mobile.

In the case of a fixed Conventional Resource ARMER Enhancement, the area to be served must be clearly defined and the RF solution should be engineered to provide for that area but not beyond it. Since a conventional channel will be patched to an ARMER talkgroup and talkgroups are a finite resource, it is encouraged that each Conventional Resource ARMER Enhancement be engineered to provide broad coverage of the area needing enhanced coverage so that multiple talkgroups are not needed for multiple sites in one geographical area. The ARMER talk group must be a local talk group dedicated exclusively to the patch.

In either a fixed or mobile Conventional Resource ARMER Enhancement, a simplex channel or a repeated channel may be employed and bridged to an ARMER talk group. The following conventional channels are authorized for use:

Locally Identified Frequencies – Simplex or Repeated
These channels may be used in a simplex or repeated configuration. They may be analog or digital and may not be encrypted. These channels may be used as dictated by their FCC license.

This option limits availability of this resource to only those who have the locally identified frequency programmed in to their radio.

7SOA-9 or 7SOA-10 (700 MHz) -- Simplex
These channels must be used in a simplex configuration; they may not be used in a repeated configuration. 7SOAs used as a Conventional Resource ARMER Enhancement must be digital and may not be encrypted. These channels may be used for routine, day-to-day business.

This option is available to all ARMER users however these channels are not required to be programmed in all ARMER radios.

SOA-3 or SOA-4 (800 MHz) -- Simplex
These channels must be used in a simplex configuration; they may not be used in a repeated configuration. SOAs must be digital and may not be encrypted. These channels may be used for routine, day-to-day business.

This option is available to all ARMER users.

800 MHz Non-Federal National Interoperability Channels (8TACs) -- Simplex
These channels may be used in a simplex or repeated configuration. This section defines their availability for use in a simplex configuration. They must be analog and may not be encrypted. Normally, these channels should not be used for routine, day-to-day business. These channels should be used for interoperability purposes.

This option is available to any public safety unit nationwide with an 800 MHz radio, including all ARMER users.

800 MHz Non-Federal National Interoperability Channels (8TACs) -- Repeated
These channels may be used in a simplex or repeated configuration. This section defines their availability for use in a repeated configuration. They must be analog and may not be encrypted. Normally, these channels should not be used for routine, day-to-day business. These channels should be used for interoperability purposes.

This option is available to any public safety unit nationwide with an 800 MHz radio, including all ARMER users. As repeated 8TACs are an interoperability asset, repeated 8TACs should be deployed to allow wide area coverage such as to a rural city or township.

4. Recommended Procedure

Local ARMER system administrators may implement Conventional Resource ARMER Enhancement to enhance coverage in areas insufficiently served by the trunked ARMER network.

The need or necessity for a Conventional Resource ARMER Enhancement channel to be programmed into radios will be determined by each agency. If an agency opts to not place this channel into their radios they will be responsible for any limitations on their ability to communicate within the Conventional Resource ARMER Enhancement coverage area.

Applications for fixed Conventional Resource ARMER Enhancement shall be submitted to the impacted Emergency Communications/Services region and then to the Operations and Technical Committee of the SECB for approvals. An impacted region is any region where the Conventional Resource ARMER Enhancement will be employed or any region within 30 air miles of where the Conventional Resource ARMER Enhancement will be employed.

Application for fixed Conventional Resource ARMER Enhancement shall include:

- A letter explaining the need for a Conventional Resource ARMER Enhancement.
- The intended coverage area and how the coverage footprint will be limited
- The agency who will be responsible for Conventional Resource ARMER Enhancement and contact information.
- A FCC License form 601 schedule D and schedule H showing the Conventional Resource ARMER Enhancement location and coverage.
- Other Conventional Resource ARMER Enhancement channels within a 30 air mile radius.

Users when entering into a fixed Conventional Resource ARMER Enhancement coverage area with the intent of using the resource will notify the governing dispatch agency. The agency will be responsible for its use during the event.

Mobile Conventional Resource ARMER Enhancement solutions may be incorporated into special-use command and communications vehicles or daily-use vehicles such as squad cars and ambulances. Mobile Conventional Resource ARMER Enhancement solutions do not need approval from the Operations and Technical Committee of the SECB. They must be programmed so that only one mobile repeater may be active in a geographical area at a time.

Established NAC and CTCSS tones must be used for all Conventional Resource ARMER Enhancement configurations.

6. Management

The local system administrator is responsible for all pieces of this process including technical matters, training, and licensing. The local system administrator is also responsible for coordinating with the Regional CASM (Communications Asset Survey Mapping) Administrator to add this resource to CASM and for coordinating with the SWIC (Statewide Interoperability Coordinator) to add this resource to the MNFOG (Minnesota Field Operations Guide).

DRAFT

To: John Anderson (System Managers Group)
Tim Lee (MnDOT)
SECB Finance Committee
Dewey Johnson (Northeast Regional Advisory Committee)
Neil Dolan (Northwest Regional Advisory Committee)
Micah Meyers (Central Regional Advisory Committee)
Ulie Seal (Metropolitan Emergency Services Board)
Bill Flatten (Southwest Regional Advisory Committee)
Tim Mohr (South Central Regional Advisory Committee)
Dave Pike (Southeast Regional Advisory Committee)

From: Jim Stromberg, ARMER Program Manager

Date: September 12, 2016

Subject: LTAC-E Change Management Request

As we are sure you are well aware, Hennepin County presented a Change Management request to the OTC asking that the state create two additional encrypted LTAC talkgroups. Both the OTC and the IOC have identified this request as a "major" change request and this request is in the Change Management process.

To date, the OTC has created a workgroup and accepted a report from it recommending that four, rather than two, new encrypted LTAC talkgroups be created. The IOC has asked the same workgroup to further explorer a few items and the workgroup has done so. A report detailing progress, discussions, and meetings as well as the original proposal are attached.

The workgroup was authorized to advance this topic through the next steps in the change management standards, including reviews by MnDOT, the SMG, the Finance Committee, and the regions. Will your groups please consider the LTAC-E proposal and provide feedback to the workgroup through Jim Stromberg.

Thank you.

DRAFT

Change Manage Progress Form
Additional Encrypted LTAC Talkgroups

Summary of Suggestion
Addition of two encrypted law enforcement talkgroups

Change Sponsor *(entity)*
MESB

Sponsor's Representative (person)
Curt Meyer, Hennepin County – curtis.meyer@hennepin.us, 612-596-1922

First Introduction to an OTC or IOC
Introduced by Curt Meyer to the OTC on May 10, 2016. A Change Proposal form was included.

Standard(s) Impacted
Proposal identified only 3.19.0 - Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups

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Technical/System Change Suggestion

OTC Decision about whether Technical/System Change Suggestion would be a Major or Minor Change (if applicable)	
Major	Minor
May 10, 2016: the OTC decided that this was a Change Management matter and the change would be a MAJOR Technical/System change. The OTC advised that a workgroup should be formed. June 14, 2016: Jim advised that the workgroup had not yet been formed because of pushback from regions about too many workgroups. Need for workgroup was reinforced and Nate Timm agreed to chair it and identify members. July 27, 2016: Received report from Nate that he intended to send to OTC via Joe G. Looked thorough. Email sent to Nate advising that he should include his recommendations for the next steps in the Change Management process.	n/a

If a Major Technical/System Change	If a Minor Technical/System Change
OTC Review of Necessity and Substantial Benefit If YES, move on to MnDOT If No, return to Proponent	MnDOT System Administrator's Recommendation
August 9, 2016: OTC approves four additional LTAC-Es. Forwards to MnDOT, SMG, regions, and Finance for review.	n/a

Change Manage Progress Form
Additional Encrypted LTAC Talkgroups

If a Major Technical/System Change
MnDOT Technical Review
August 25, 2016: Workgroup suggests sending update to Tim Lee after they review today's meeting notes. August 26, 2016: Curt, Nate, and John all reported that my meeting notes looked ok. September 12, 2016: Summary sent to MnDOT for review.

If a Major Technical/System Change
System Administrator Review
August 25, 2016: Workgroup suggests sending update to John Anderson after they review today's meeting notes. August 26, 2016: Curt, Nate, and John all reported that my meeting notes looked ok. September 12, 2016: Summary sent to SMG for review.

If a Major Technical/System Change
Regional Input

If a Major Technical/System Change
Finance Committee Review and, if applicable, Regional Concurrence in Local Share

If a Major Technical/System Change	If a Minor Technical/System Change
OTC Review and Recommendations	If a Standard Revision is Required, OTC Review and Recommendations
	n/a

If a Major Technical/System Change	If a Minor Technical/System Change
SECB Decision	MnDOT Decision
	n/a

Operational/SOP Change Suggestion

IOC Decision about whether Operational/SOP Change Suggestion would be a Major or Minor Change (if applicable)	
Major	Minor
May 17, 2016: Mentioned to IOC that issue would be on the next agenda as an item. IOC needs to decide if this is a major or minor change. August 16, 2016: IOC decided this was a Major Change.	n/a

Change Manage Progress Form
Additional Encrypted LTAC Talkgroups

If a Major Operational/SOP Change	If a Minor Operational/SOP Change
IOC Review of Necessity and Substantial Benefit If YES, IOC Determines Change Proposal Review Requirements If No, return to Proponent	ECN Recommendations
August 16, 2016: IOC recommended that the OTC workgroup should study this further. Specific items to study include home zone mapping, encryption keys, and patching rules. Micah offered to join the workgroup. Suggested that King Fung or Curt Meyer join the workgroup with Nate. August 17, 2016: Email sent to John (per Nate's suggestions) and Curt asking if they could be part of a meeting to finish this discussion. Asked that they forward to King. John suggested Ron and Rod join discussion for their Home Zone Mapping knowledge. August 19, 2016: Meeting invite sent to Nate, John, Curt, King, Rod, and Ron for 8/25/16.	n/a

If a Major Operational/SOP Change
IOC Requirements for Assessments and Focus Groups
August 16, 2016: OTC decided this was a major issue and supported the OTC workgroup should study this further. Specific items to study include home zone mapping, encryption keys, and patching rules.

If a Major Operational/SOP Change
ECN Report

If a Major Operational/SOP Change
Facilitator Reports
August 25, 2016: Workgroup call held. Attendees: King Fung, John G., Curt M., Nate T., Ron J., and me. Encryption Key: Keep same as others. May be time to review encryption standards but not as part of this process. Home Zone Mapping: Mostly metro use. Not much demand for patching. LTACE1-4 currently in Zone 4. Recommend putting 2 of the new ones in zone 1 and the other two in zone 2. New talkgroups v repurposing SIUs: Leave SIUs alone. Create new talkgroups. Patching Rules: Use existing standards. Consider reviewing the patching standards while reviewing the encryption standards. Discussion about if there are enough non-encrypted LTACs and the thought was that there were. STACs also available. I should draft an update and sent it to this group for review and then forward to SMG (John) and MnDOT (Tim). Pending. August 26, 2016: Curt, Nate, and John all reported that my meeting notes looked ok. September 12, 2016: Summary sent to MnDOT for review.

Change Manage Progress Form

Additional Encrypted LTAC Talkgroups

If a Major Operational/SOP Change
MnDOT Report

If a Major Operational/SOP Change
Reports and Assessments Circulated to Regions (ECBs, RAC, O&Os)

If a Major Operational/SOP Change
Finance Committee Review and, if applicable, Regional Concurrence in Local Share

If a Major Operational/SOP Change	If a Minor Operational/SOP Change
IOC Review and Recommendations	IOC Review and Recommendations

If a Major Operational/SOP Change	If a Minor Operational/SOP Change
SECB Decision	SECB Decision

Allied Radio Matrix for Emergency Response (ARMER)

Change Proposal

1. Administrative Information:

Type of Change (Technical or Operational)

Technical and Operational

Date Submitted:

Submitter (e.g., Regional Radio Board or state agency):

Metropolitan Emergency Services Board - MESB

Change Sponsor (Individual) Contact Information:

Curt Meyer, Hennepin County – curtis.meyer@hennepin.us, 612-596-1922

2. Summary of proposed change(s):

Add 2 statewide encrypted law enforcement talk groups (LTAC9E & LTAC10E)

3. Existing SRB standards impacted:

3.19.0 - Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups

4. Scope of Change:

Impact on users (e.g., majority of users, minority of users, number of counties/regions):

All law enforcement radios that are equipped with DES-OFB encryption.

Impact on the placement of resources in communications equipment (e.g., upgrades):

2 encrypted talk groups to be added to encrypted law enforcement radios.

Impact on operational procedures (e.g., changes to operational standards):

Language for statewide encrypted law enforcement talk groups must be updated in the existing radio standard.

Impact on user training (e.g., training required for compliance):

Minimal training would be required as currently there are statewide encrypted talk groups.

Impact on reprogramming or configuration of end-user equipment:

Subscribers: Some training would be required as currently there are no regional encrypted radio resources.

Consoles: All law enforcement PSAP radio consoles would add the resources.

Other equipment: These new resources should be recorded.

5. Existing deficiencies, problems, needs addressed by the proposed changes:

Frequently all 4 encrypted statewide encrypted law enforcement talk groups are in use leaving none available for use.

Expected improvements & benefits resulting from the change:

More encrypted interoperable law enforcement statewide talk groups are available for use. This will relieve current congestion making additional encrypted interoperable law enforcement talk groups available. More encrypted law enforcement radios are being added. This will allow for future expansion.

6. Proposed implementation & transition plan including timeline, milestones and training:

Start and End Date:

Beginning of the next Change Management radio programming cycle. No end date.

Description of Implementation Plan:

Add to dispatch consoles, then to subscriber radios.

7. Preliminary assessments which have been completed (documentation attached):

See attached documentation.

8. List of Attached proposed new or revised Standards, Plans or Best Practices Guides:

3.19.0 - Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups

9. Other Attachments:

10. Tracking and Approvals:

Submitter Approval:

Signature Date

DECN Receipt:

Signature Date

OTC/IOC Determination of Need:

Signature Date

MnDOT/ECN Approval:

Signature Date

OTC/IOC Approval of Assessments:

Signature Date

Finance Committee Approval:
(if required)

Signature Date

Final SRB Approval:

Signature Date

LTAC5E

	User Total	PTT Total	Usage
State Agencies - MN	37	1988	1.2%
Federal Agencies	96	26333	15.9%
Non Metro Agencies	182	19592	11.8%
Metro Agencies	333	117897	71.1%

Total	
165810	100%

LTAC6E

	User Total	PTT Total	Usage
State Agencies - MN	39	2000	1.2%
Federal Agencies	95	26327	15.9%
Non Metro Agencies	181	19586	11.8%
Metro Agencies	333	117897	71.1%

Total	
165810	100%

LTAC7E

	User Total	PTT Total	Usage
State Agencies - MN	12	843	2.0%
Federal Agencies	48	13244	31.6%
Non Metro Agencies	119	6084	14.5%
Metro Agencies	108	21789	51.9%

Total	
41960	100%

LTAC8E

	User Total	PTT Total	Usage
State Agencies - MN	22	4382	4.7%
Federal Agencies	40	41055	44.2%
Non Metro Agencies	113	17244	18.6%
Metro Agencies	82	30201	32.5%
		Total	
		92882	100%

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

Document Section 3	**Interoperability Standards**	**Status:** Complete
State Standard Number	**3.19.0**	
Standard Title	**Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups**	
Date Established		**SRB Approval:** 3/28/2013
Replaces Document Dated	**03/19/2013**	
Date Revised	**3/25/2016**	

1. Purpose or Objective

The purpose of this standard is to establish policy and procedures for use of the 800 MHz statewide law enforcement interoperability talkgroups. The LTAC and SIU talkgroups are a system wide resource to facilitate communications between law enforcement agencies including, but not limited to, Special Investigative Units that typically do not communicate with each other on a regular basis.

2. Technical Background

- **Capabilities**

It is possible to have access to one or more common pool of clear and encrypted talkgroups in radios used by agencies that share the statewide 800 MHz radio system. These clear and encrypted talkgroups can be used for a wide range of intercommunication when coordination of activities between personnel of different agencies is needed on an event.

- **Constraints**

LTAC5E through LTAC10E can be used by all law enforcement agencies with encrypted radios and can be programmed in law enforcement dispatch consoles.

Deleted: LTAC8E

The LTAC5E through LTAC10E and SIU1E through SIU4E talkgroups are always encrypted.

Deleted: LTAC8E

SIU1E through SIU4E are only to be use by Special Investigation Units; for example, Gang and Drug task forces, SWAT, etc. SIU1E through SIU4E may not be programmed in dispatch consoles.

When using SIU1E through SIU4E, if non-Special Investigation Unit officers and dispatchers need to participate in an activity, it is up to the local incident command to supply those persons with radios that have SIU1E through SIU4E.

SIU1E through SIU4E are not to be patched with any other talkgroup.

3. Operational Context

The LTAC and SIU talkgroups are a system wide resource to facilitate communications between law branch agencies including, but not limited to, Special Investigative Units that typically do not communicate with each other on a regular basis.

4. Recommended Protocol/ Standard

LTAC1 through LTAC4 TALKGROUPS

TG Requirements	For Whom?
Required	All Law Enforcement Users & PSAP
Recommended	
Optional	
Not Allowed	Non-law Enforcement
Site Access	System Wide – All Sites

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

LTAC5E through LTAC10E TALKGROUPS

Deleted: LTAC8E

TG Requirements	For Whom?
Required	All Law Enforcement users with Encrypted Radios
Recommended	All Law Enforcement PSAPs
Optional	
Not Allowed	All others

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	Encrypted TGs only
Hard Patch	No	

SIU1E through SIU4E TALKGROUPS

TG Requirements	For Whom?
Required	
Recommended	SIU communications, i.e. Gang, Drug, Swat task forces
Optional	
Not Allowed	All others

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	No	
Hard Patch	No	

The StatusBoard application will be used to manage the law enforcement pool talkgroup resources.

Console Resource Requirements and Patching

Integrated law enforcement ARMER dispatch consoles (Gold Elite, MCC7500, etc.) shall have LTAC1 through LTAC4 in their configuration, available for patching. If the patched talkgroups have different "home zones," multiple repeaters will be assigned, impacting system loading. Therefore, extended duration patching of statewide interoperability talkgroups to other talkgroups should be avoided. Users should transition to the statewide talkgroup as soon as it can be done safely, and the patch should be terminated. LTACs should not be patched to other statewide interoperability talkgroups. In order to meet the communications needs for an event, the 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 LTAC talkgroups and regional TACs, although this would not be preferred as a method of resolving communications needs, because it reduces the number of talkgroups available for an incident.

LTAC5E through LTAC10E can optionally be programmed in law enforcement dispatch consoles but may not be patched to unencrypted ARMER talkgroups.

Deleted: LTAC8E

SIU talkgroups may not be programmed in dispatch consoles or any ARMER resource. When using SIU1E through SIU4E, incident command will provide radios for other non-SIU entities assisting, such as patrol officers, dispatchers, etc.

None of the SIU and LTAC-E talkgroups shall be part of any multi-group.

All radios using LTAC5E through LTAC10E and SIU1E through SIU4E must use the state assigned Data Encryption Standard (DES) encryption keys. The Minnesota Department of Transportation (MnDOT) System Administrator will be responsible for managing and periodically updating the statewide encryption keys.

Deleted: LTAC8E

It is highly recommended that SIU radio users program a sufficient quantity of SIU and LTAC-E talkgroups into their subscriber radios to meet interagency communications needs, starting with LTAC5E.

Dual Naming

Existing LETAC-1 through LETAC-4 talkgroups are renamed LTAC5E through LTAC10E. Existing LESIU-1 through LESIU-4 are renamed SIU1E through SIU4E. Dual names will be added to PSAP consoles and used for the renamed talkgroups and will remain in place until June 26, 2015, or until all affected ARMER radios have been reprogrammed. The old name will be primary until June 26, 2014, then secondary until June 26, 2015. Dual naming will be removed from PSAP consoles on June 26, 2015.

Deleted: LTAC8E

5. Recommended Procedure

The usage of LTAC1 through LTAC4 for **PREPLANNED NON-EMERGENCY** interoperability events should be LTAC4 through LTAC1, in that order.

The usage of LTAC1 through LTAC4 for **UNPLANNED EMERGENCY** incidents should be LTAC1 through LTAC4, in that order.

LTAC5E through LTAC10E may be patched **ONLY TO OTHER ENCRYPTED TALKGROUPS** during PREPLANNED NON-EMERGENCY interoperability events and UNPLANNED EMERGENCY incidents.

Deleted: LTAC8E

SIU1E through SIU4E may only be used directly and not be patched to other resources to meet the communications needs of an event or incident.

The dispatch center will use the StatusBoard application to identify use of the LTAC and SIU resources.

When an SIU resource is needed, any SIU agency may contact an appropriate 800 MHz dispatch center, capable of assigning SIU resources, to have the next preferred available SIU assigned and recorded on the StatusBoard. There must be an agreement between the SIU agency and the dispatch center to provide this service.

At the end of the event, the 800MHz assigning dispatch center must clear the status, so the other dispatchers will know this resource is available for use.

6. Management

The PSAP managers for agencies on the statewide 800 MHz radio system shall ensure that there is a procedure for assigning LTAC and SIU talkgroups.

The MnDOT System Administrator shall be responsible for the StatusBoard application.

Dispatch center operators shall receive initial and continuing training on the use of this procedure.

Responsibility for monitoring performance and for modifying this procedure shall be a function of the agencies using this resource.

Office of the Sheriff

Commitment to Excellence

William M. Hutton
Sheriff

Daniel Starry
Chief Deputy

7/28/2016

ARMER Operations and Technical Committee
Chair Joe Glaccum
4501 68th Avenue North
Brooklyn Center, MN 55429

Dear Chair Glaccum,

In the June meeting of the OTC I was directed to research congestion on statewide encryption talkgroups and provide recommendations from frequent users of these talkgroups.

My report to the OTC committee follows.

Background:

In 2016 various ARMER administrators and dispatchers using the StatusBoard application began noticing congestion on the four statewide encrypted LTAC talkgroups (LTAC5-E – LTAC8-E). It was noted that all four of these talkgroups were frequently either in use or reserved. Hennepin County researched the congestion and determined that a majority of the traffic was from metro users. The metro Technical and Operations Committee (TOC) is currently using the change management process to look at adding at least two metro encrypted talkgroups. Because the nature of these operations often go outside of regional boundaries or involve staff from other regions, the TOC change management request also suggested adding more statewide talkgroups.

Research:

I first reached out to Bureau of Criminal Apprehension (BCA) agent Lance Lehman. Agent Lehman is responsible for many radio related matters at the BCA and is very familiar with the agency's radio protocols and challenges. We spoke by telephone on 6/16/2016.

Agent Lehman confirmed that encrypted LTAC congestion has been a challenge for the BCA and that something should be done to correct this problem. Agent Lehman agreed that adding some metro regional encrypted talkgroups should help the problem.

During our conversation we envisioned the following additional statewide solutions:

1) Add 2 to 4 new LTAC encrypted talkgroups
    - Pros: More capacity
    - Cons: Requires all encrypted law radios and console sites to be re-programmed.
2) Change SIU talkgroups from "taskforce only" to all law users, and allow these talkgroups in consoles
    - Pros: More capacity without a programming change, and SIU talkgroups could now be logged
    - Cons: Loss of taskforce only statewide communications. Non-taskforce radios will need to be re-programmed.
3) Change all regional encrypted talkgroups to statewide access
    - Pros: More capacity, without a programming change for BCA radios.
    - Cons: Loss of regional encrypted talkgroups. Some regions may allow their encrypted talkgroups in non-law enforcement radios. Non BCA radios will need to have the other regional encrypted talkgroups added.

Agent Lehman favored the first statewide solution. Agent Lehman suggested I contact BCA agent Brad Marquart for further input. Agent Marquart is the coordinator for the various law enforcement taskgroups around the state.

Agent Marquart agreed that there is a capacity problem on the LTAC encrypted talkgroups. Agent Marquart forwarded my email to the regional taskgroup commanders soliciting input on suggested changes. I received six replies. The consensus from the taskgroup commanders was to add more LTAC talkgroups, and that additional metro encrypted regional talkgrops will be beneficial in lightening load on the statewide talkgroups.

I later discussed the research results with Hennepin County Radio Manager John Gunderson. Mr. Gunderson offered a fourth compromise option:

4) Keep SIU 1 and 2 under current restrictions. Change SIU 3 and SIU4 to LTAC9-E and LTAC10-E. A report could be generated to show SIU talkgroup usage. If SIU 3 and 4 are infrequently used, this solution would provide more capacity and maintain taskforce only options. An immediate re-program would not be needed in taskforce radios. LTAC9-E and LTAC10-E would need to be added to law enforcement patrol radios.

Conclusion:

I believe any of the four above options would be classified as a major change. It is my recommendation that OTC moves this matter forward into change management, using the four above options for consideration during the study.

Next Steps:

After conferring with SWIC Jim Stromberg, the following next steps are anticipated:

1) MnDOT Technical Review
2) Review by Interop Committee (IOC)
    a. Acceptance as a major or minor change
    b. Decision on focus group
    c. ECN report
    d. Facilitator report from focus group
    e. MnDot report
    f. Regional concurrence
    g. IOC official approval
3) Review by System Administrators (SMG meeting?)
4) Regional input
5) Finance review
6) Back to OTC for final vote

Respectfully Submitted,

Nathan Timm
Radio Manager
Washington County Sheriff's Office

An example of Status Board encrypted LTAC congestion taken at the time this report was completed (7/28/16 9am):

LTAC 5E-LETAC 1	**Jason Scheffler (Kandiyohi County Sheriff's 911)**	Resource In Use
LTAC 6E-LETAC 2	**Liane Yanta (Hennepin Sheriff's Communications)**	Resource Reserved
LTAC 7E-LETAC 3	**David Kravik (BCA)**	Resource In Use
LTAC 8E-LETAC 4	**Liane Yanta (Hennepin Sheriff's Communications)**	Resource In Use