

STATEWIDE EMERGENCY COMMUNICATIONS BOARD OPERATIONS & TECHNICAL COMMITTEE

March 8, 2016
1:00 – 3:00 p.m.
MnDOT Arden Hills Training Center
1900 West County Road I, Shoreview MN
Chair: Joe Glaccum

Call-in Number: 1-888-742-5095
Code: 2786437892#

AGENDA

Call to Order

Approval of Agenda

Approval of Previous Meeting's Minutes

Announcements

Action Items

1. North Memorial Logging Solution Request (Joe Glaccum)
2. Stearns County Requested Site Addition (Kristen Lahr)
3. LOGIS Consortium Request (Tom Folie)
4. Standard 1.1.0 Operational Management (Cathy Anderson)
5. Standard 3.16.2 Use of Statewide 800 MHz STAC 1-12 Talkgroups- Air Ambulance Emergency Landing Zone Coordination (Cathy Anderson)
6. Standard 3.28.0 Use of Statewide Emergency Management Talkgroup SEMTAC (Cathy Anderson)
7. Standard 3.28.2 Use of Duty Officer Talkgroup, MNDO (Cathy Anderson)
8. Standard 4.10.0 System Maintenance: Programming and Qualifications (Cathy Anderson)
9. Dispatchers Best Practices Guide (Cathy Anderson)

New Business

- New representatives from the Central Region (Kristen Lahr and Al Fjerstad replacing Tom Justin and Ace Bonnema)
- New representative from the Northwest Region (Neil Dolan replacing Shane Richard, Brian Zastoupil remains the alternate)

Old Business

Regional Reports

- Northwest (Dolan)
- Northeast (Hegrenes)
- Northern RIC (Bruning)
- Central (Lahr)
- Metro (Gundersen)
- Central/Metro RIC (Juth)
- South Central (Wesley)
- Southeast (Freshwater)
- Southwest (Hamann)

- Southern RIC (Donahue)

Other Reports

- MnDOT (Lee)
- System Managers Group (Lee)
- DPS Standing Report (Stromberg)
- Status Board Report (Anderson)
- Change Management Workgroup (Stromberg)

Adjourn

STATEWIDE EMERGENCY COMMUNICATIONS BOARD
OPERATIONS & TECHNICAL COMMITTEE

February 9, 2016
MnDOT Arden Hills Training Center

MEETING MINUTES

Attendance

Members Present

Member/Alternate

Chair Joe Glaccum/Vacant- Minnesota Ambulance Assn
Vice Chair Dave Thomson/Vacant - MN Chiefs of Police Assoc.
John Gundersen/Ron Jansen - MESB
Tim Lee/Jim Mohn/Mukhtar Thakur- MnDOT
Tim Boyer/- MN State Patrol
Shane Richard/Brian Zastoupil- NW Region
Bruce Hegrenes/Monte Fronk - NE Region
Terry Wesley/Darrin Haeder - SC Region
Kristen Lahr/Al Fjerstad/Paul McIntyre - CM Region
Rick Freshwater/Michael Peterson - SE Region
Mike Hamann/Kimberly Hall - SW Region

*Members attending are marked with yellow highlight.

Guests reporting:

Name

Representing

Jim Stromberg, ECN
Cathy Anderson, ECN
Carol-Linnea Salmon, ECN
Randy Donahue, ECN
Rick Juth, ECN
Troy Tretter, MESB
Rod Olson, City of Minneapolis
King Funk, HCSO
Dereck Lyde, Northland Business
Mary Borst, Mayo
Micah Myers, Central ESB
Bob S., Allina
Kurt W.

CALL TO ORDER

Vice Chair Thomson calls the meeting to order at 1:01 p.m.

AGENDA REVIEW

Vice Chair Thomson requests to amend the agenda to move the StatusBoard report to the beginning.

Terry Wesley moves to approve the agenda as amended.

Bruce Hegrenes seconds.

Motion carries.

APPROVE PREVIOUS MEETING'S MINUTES

Rick Freshwater moves to approve the January meeting minutes.

Wesley seconds.

Motion carries.

STATUS BOARD UPDATE (STEVE MUELLER)

Steve Mueller reports that the StatusBoard polling frequency was 90 seconds but was changed to 3 minutes so there will be fewer slowdowns in the application.

Anderson says the PSAP managers and supervisors were sent an email about that. They should manually refresh every time they are going to make a reservation on StatusBoard to make sure they are seeing the most updated information.

MN Task Force One Talkgroup Request (Ron Jansen)

Ron Jansen introduces a request from Minnesota Task Force 1 (MN-TF1) as presented in the meeting materials. MN-TF1 is made up of the Minneapolis Fire Department, Dakota County Special Operations Team, Edina Fire, Rochester Fire and St. Paul Fire. They perform in a wide variety of disciplines including heavy rescue, hazmat, advanced rescue operations. They are requesting a statewide talkgroup to be able to utilize so they can quickly find it in their radios during incidents or in a convoy on the way to an incident.

Freshwater makes a motion to approve a statewide talkgroup for MN-TF1.

John Gundersen seconds the motion.

Freshwater requests that we get the hex code as soon as possible. Jansen will get that information as soon as possible.

Motion Carries.

HENNEPIN EMS PARTICIPATION PLAN AMENDMENT (KING FUNG)

King Fung introduces a request from Hennepin County EMS. In preparing for the 7.19 upgrade, Hennepin EMS will be purchasing a Motorola AIS server on the ARMER system. They are also adding a new Revcard logging recorder system. It has been approved by the Metro Technical and Operations Committee.

Tim Lee makes a motion to approve the Hennepin County EMS Participation Plan amendment.

Freshwater seconds the motion.

Motion carries.

STANDARD 2.10.0 (CATHY ANDERSON)

Cathy Anderson introduces the edits to Standard 2.10.0, Telephone Interconnect. There is only one recommended edit, which is to change the word Users to Subscriber Radios.

She adds a note about the sentence which reads, "Telephone interconnect calls can be placed to talkgroups of the system if the talkgroup is configured for telephone interconnect functionality." She asked John Anderson if there are any talkgroups on our system which are configured to accept a phone call. John Anderson did not find any.

**Gundersen makes a motion to approve the standard as presented with the proposed edit.
Freshwater seconds the motion.**

Discussion about the sentence about telephone interconnect calls not being needed in the standard if there are no talkgroups with that capability.

Gundersen makes a friendly amendment to his motion to remove the sentence about telephone interconnect calls. Freshwater agrees to accept the friendly amendment.

Motion carries as amended.

STANDARD 2.12.0 (CATHY ANDERSON)

Anderson introduces the proposed edits to Standard 2.12.0, Scanning. She lists the edits that are recommended.

Under paragraph two entitled Constraints, it is recommended to delete the sentence which reads, "While scanning is available on ARMER, it works differently than in conventional radio systems." This is already explained under the section entitled Capabilities.

Under the second paragraph under section number four, entitled Recommended Protocol / Standard, a reference to Standard 2.7.0, Use of Shared Talkgroups, was added.

Under section number five, Recommended Procedure, the first paragraph was deleted. The information about permissions was included in the preceding paragraph.

Under section five, in the third paragraph, the word "talk-around" was removed.

Under section five, a fifth paragraph was added saying, "Talkgroup permission forms can be found on the Statewide Emergency Communications Board (SECB) website under Operations and Technical Committee (OTC)."

Under section six, Management, the language was changed to take the responsibility for scanning issues from the Statewide System Administrator and given to the site owner and local System Administrator. If there are any issues that cannot be resolved at the local level, those should be brought to the Statewide Administrator.

Jim Stromberg suggests that the language be changed to say the information will be on the ECN website and not list a specific spot on the website as this could change.

**Freshwater makes a motion to approve the recommended changes to Standard 2.12.0 with the additional change to say ECN website instead of SECB website and not list where it will be listed on the website.
Bruce Hegrenes seconds the motion.
Motion carries.**

STANDARD 2.14.0 (CATHY ANDERSON)

Anderson introduces the proposed edits to Standard 2.14.0, Private Call.

Under number 2, Technical Background, under Constraints, bullet point one was edited to clarify that a private call will consume a site radio channel for “each site involved for” the duration of the conversation.

Under the seventh bullet point in that same list, scanning was added so that users know that they cannot scan when they are on a private call.

Under bullet point eight, there was some discussion that you can't manage the usage of a private call on the system, unlike interconnect calls, which can be managed.

Gundersen makes a motion to approve Standard 2.14.0 with the recommended edits.

Tim Boyer seconds the motion.

Motion carries.

STANDARD 1.3.0 (CATHY ANDERSON)

Anderson introduces the proposed edits to Standard 1.3.0, Database Management, most of which are language clean up.

In the second bullet point under Purpose or Objective, “radio users” was removed because there is not a separate database for it because it is part of subscriber radios now.

The workgroup left in the part about storm plans because there are groups that might use it.

Bullet number six, “system side of the fleetmap programming” was removed because it is talkgroups and multigroups now-- whatever is programmed into Provisioning Manager.

The last paragraph under section number one was removed. It said that “the database does not contain the software load information of software load...” but now it does.

Under number three Operational Context, manager was removed and “local” was added (local system administrator).

In the third, fifth and seventh paragraphs, under Operational Context, language was changed to be consistent with other standards.

Under number five, Recommended Procedure, the last sentence was removed to take out System Managers Group (SMG) to be consistent with other standards.

Under number six, Management, language was changed to be consistent with other standards.

Hegrenes makes a motion to approve the proposed edits to Standard 1.3.0.

Wesley seconds the motion.

Motion carries.

NEW BUSINESS

DISCUSSION OF CAPACITY ISSUES AND HOW TO ADDRESS THEM (VICE CHAIR THOMSON)

Vice Chair Thomson introduces the subject and reports that at the last SECB meeting one of the board members raised the issue of busies, particularly in the Metro region.

Troy Tretter adds that the discussion was raised during a regional leadership meeting about a standard that had been changed in the Metro region to tighten participation plans because in the Metro region there is no additional capacity to add channels. The concern is to address this before it becomes a bigger issue.

Gundersen says in Hennepin, most of the growth has been in the category of other non-public safety entities, such as school districts and EMS groups. The growth we are seeing in the Metro is beyond the conventional police and fire.

Vice Chair asks if roaming is as big an issue as growth.

Gundersen responds that Hennepin West always has roaming traffic and that continues to be an issue and that is part of what drove the Metro standard to be tighter. Some of the counties that came on were startled by how much roaming traffic there is. From an operational standpoint, whenever there is roaming it's partially because it is an interoperable system and that's a lifesaver so it's a tradeoff. He adds that the Metro region is looking at adding more regional talkgroups. They only have 8 and no encrypted ones.

Hegrenes says in Greater Minnesota they are seeing a lot of requested sites. You'll see a site with three different counties all having requested talkgroups on it. It's not an issue of not finding frequencies in Greater MN it's finding the money to build the capacity. He doesn't think the committee should look for one solution that fits both Metro and Greater Minnesota. Greater MN has the capacity or the ability to build capacity into the system. It is important for entities like school buses and snow plows to be able to use the system when they are operating in areas where there is no cell phone coverage.

Vice Chair Thomson asks the committee if a workgroup should be formed or if there should be two workgroups, one for Metro and one for Greater Minnesota.

Gundersen says he thinks the Metro is at a stable place and does not think there is a need for a workgroup. They met with some of the users and engaged with them. Metro Mobility, for example. They have worked with them because they were generating a lot of voice traffic. The region is dealing with the overall problem and Gundersen doesn't see a need right now for a workgroup but the region would be happy to cooperate. He adds that there are a lot of elements. There is training for the operators, configuration of how many talkgroups can be used for an event, engaging with individual users. Another idea would be with the COML program we could come up with some standardized ideas for the radio plans.

Jansen adds that the committee should look at home zone mapping. When you start patching in the STACs outside of zone 1 or zone 3 you are tying up two resources at every repeater site. If anything is going to change with home zone mapping it would need to happen under change management so should be looked at while that is open.

Discussion about if and how to limit non-public safety entities on the system. Discussion about requesting non-public safety entities to contribute financially.

Tretter adds that at the Interop conference John Anderson will be chairing a session on capacity issues. Jansen and Tretter will be in it too. It will talk about Best Practices that are used in the Metro that could be applied to Greater Minnesota and also about what might be different for Greater Minnesota.

Juth says the concerns about additional users is an issue that is going to need to be addressed because there will come to a point where there is no more capacity left. The Steering Committee should address the issue.

Thomson says it sounds like particularly in Hegrenes area the busies come from requested sites or some subscriber programming issues loading an adjacent site beyond capacity. Those are things we have procedures to address. Do we have other capacity issues that are not being handled by the Metro's more restrictive standard?

Freshwater says it's more the concern about potential use. How do we justify and determine what's needed before it's needed?

Hegrenes says the Northeast region has taken a strong look at busies and has alleviated a lot of it. Some was configuration, some was users. That is part of the RAC agenda every month. The RAC looks at what can be changed. It has led to some unique things –one was a federal bus company that was part of the EOC that requested to come on the system. We recommended that they come on with a full participation plan. They were a multi-county and multi-region and when they took a look at the price of hiring a consultant to develop a plan they decided to build their own radio system. There are a lot of things the regions can do. Make it a priority and take a look at it every month.

Vice Chair Thomson sums up the discussion that the committee's preference was to look at capacity issues at the regional level and discuss this further and report back. The issues are different for the Metro and Greater Minnesota. There was not a decision to create a workgroup at this time.

Gundersen suggests that each month when the regions give regional reports to the committee the issue of system loading be addressed.

OTC POWER POINT TEMPLATES (VICE CHAIR THOMSON)

Jim Stromberg reports that the Steering Committee Education and Outreach workgroup has been tasked with branding of the SECB. As a part of this, Power Point templates were created for each of the committees. The OTC Power Point templates are included in the meeting packet and are available on the OTC page of the ECN/SECB website.

OLD BUSINESS

REGIONAL REPORTS

Northwest (Zastoupil)

Zastoupil reports that Lake of the Woods County will be applying for a grant to increase coverage in the Northwest angle where there are coverage gaps. More information will be forthcoming.

Cass County, North Dakota, approached the RAC about building a 700 or 800 MHz trunk system to cover the county. We looked at the cost of purchasing our own zone controller. There is a State of North Dakota project looking at the feasibility of a statewide trunk radio system. Cass County does not want to wait for that to come to fruition because the funding in North Dakota is on a biennial schedule. The short term approach would be to connect a Cass County subsystem to the zone controller in Detroit Lakes, which has capacity. Then, if and when North Dakota's system becomes a reality, the Cass County, North Dakota subsystem would be pointed toward a North Dakota zone controller and we would deploy an ISSI between ARMER and the North Dakota system. We've met with Marcus Brunings and Jim Stromberg and have had discussions and are educating Cass County public safety officials. This project would be funded by North Dakota and we are working on funding models. We have a quote from a consultant and are looking at a 5-6 month time line. We are looking for a win-win solution for North Dakota and Minnesota. There are some coverage shortages in Norman County, Minnesota and we would allow Norman County public safety to roam over this way and expand some channel capacity on the Minnesota side. Our approach is to be early and transparent and give people time to think about it and vet it.

Northeast (Hegrenes)

Hegrenes reports that the region is working on grant proposals. They are looking at a training conference to be held in August and are looking at as a mini-Interop conference for the region. They are talking to their user

agencies and finding that there is a lot of need for re-training and train-the-trainer. With regard to system busies—there are two channels at two sites in Carleton County with busies. St. Louis County is adding two more channels for capacity issues in the Duluth simulcast plus they are going to build out the rest of the five channel sites in St. Louis County. As a region they have been looking at capacity and taking a proactive stand to make sure they stay ahead of it.

Northern RIC (Bruning)

No report.

Central (Bonnema)

Micah Myers reports that the region is beginning discussions to expand the regional system admin role to more of a system coordinator. The region is also busy with grant proposals and reviewing standards. They are working on a couple of site additions, one in Mille Lacs County and another in Breckenridge.

Metro (Gunderson)

Gunderson reports that the Metro Technology and Operations Committee (TOC) met on January 27 and approved many changes to metro standards, updating with current language in regards to state and metro plans. Some of the standards will be going to workgroups to review the operational context of the standards. They discussed the metro use of statewide talkgroups LETAC5E-8E and found that the most use of these talkgroups was by the metro. There was discussion of the possibility of regional Metro Encrypted talkgroups. More research will be done to support future discussion at the TOC. The TOC approved the grant application 2015 SHSP grant, which will be used for training. Curt Meyer has been promoted to Assistant Radio Systems Manager at the Hennepin County Sheriff's Office. He will continue to serve as our sub-system administrator until his replacement in that position has been chosen.

Central and Metro RIC (Juth)

Rick Juth reports that the Central Region has as a standing agenda item at all RAC meetings to address site busies using the information provided by MnDot's monthly report. They have taken action on adding channel capacity or adding site infrastructure to the system.

South Central (Wesley)

Westley reports that the RAC met in January and discussed the 2015 SHSP grant, \$25,000 of it being for planning and training. They are working on getting plans together to submit for potential projects, including BDAs and a couple of school systems and a full site for the city of Fairmont. Another discussion was about Motorola and Alpha Wireless putting together an APEX radio program training for the region.

Southeast (Freshwater)

Freshwater reports that the region is currently at 11 channels on the subsystem with four state sites. The region will add a 12th channel in April. They've coordinated the frequencies with MnDot. The joint RAC /ECB meeting was scheduled last Monday but cancelled due to weather.

Thomson reports that the regional logging continues to be successful. Mower County was added and Fillmore is coming on. There is capacity to add additional counties. The region has three logging admins now from different counties.

Southwest (Hall)

No report.

Southern RIC (Donahue)

Randy Donahue reports that there have been weather challenges in the south that have caused cancellation of meetings. Rock County has been added to the regional logger. Everybody has submitted their grant requests.

OTHER REPORTS

MnDOT (Lee)

Tim Lee reports that there are a couple of sites under construction in the Northeast part of state. At Cromwell and Duluth South they are in the process of awarding contracts. MnDot is continuing to work on the remaining sites.

Systems Managers Group (Lee)

Motorola participated in the meeting and there was a discussion about the 7.15 upgrade. Motorola will be back at the end of March to discuss this further.

Hegrenes adds that there will be an upgrade impact training scheduled for March at the SMG meeting.

Jansen adds that Motorola had some planned outages during normal business hours for the switch over and we raised that as a concern and were able to get the times changes. Motorola was going to do a system-wide shut down but is now looking to see if they can do the shut-down zone by zone.

DPS Standing Report (Stromberg)

Stromberg reviews his top four priorities for the OTC as identified with Chair Glaccum and Vice Chair Thomson:

- 1) The 7.19 upgrade;
- 2) Change Management;
- 3) Strategic reserve equipment, standards and practices to ensure that resources are being maximized;
- 4) Website updates.

He will report on the progress on these priorities every month.

Change Management (Stromberg)

Stromberg reports that the workgroup met on the January 26 and drafted a new standard. The draft standard is gathering feedback from the workgroup members and Stromberg hopes to have the feedback ready to present to the OTC at next month's meeting. The workgroup removed the flow chart from the standard and identified what would be the situations when the change management process would need to be employed or engaged. In essence, if an idea is brought to the OTC, the OTC would decide what other committees need to be engaged. In the meantime, the OTC could grant provisional authority, with the approval of the SECB. The requestor would solicit feedback from the other committees as directed by the OTC (within six months) and bring the feedback to the OTC. At that point the OTC would begin its deliberations.

Hegrenes asks if anything has been brought forward for this cycle of change management.

Stromberg responds that a call was put out for change management ideas and the SOA repeater solution is the only thing submitted so far. Stromberg has an idea he may like to add about the programming of cache radios.

Meeting adjourns at 3:04 p.m.



Vice Chair Thomson:

On behalf of North Memorial, I am requesting that the OTC approve the attached Logging Solution for our operation and forward to the SECB. This is necessary to become compliant with the Motorola upgrade that is coming this spring.

MnDOT has review the plan and has no issues from a technical perspective.

Thank you for your consideration.

Regards,

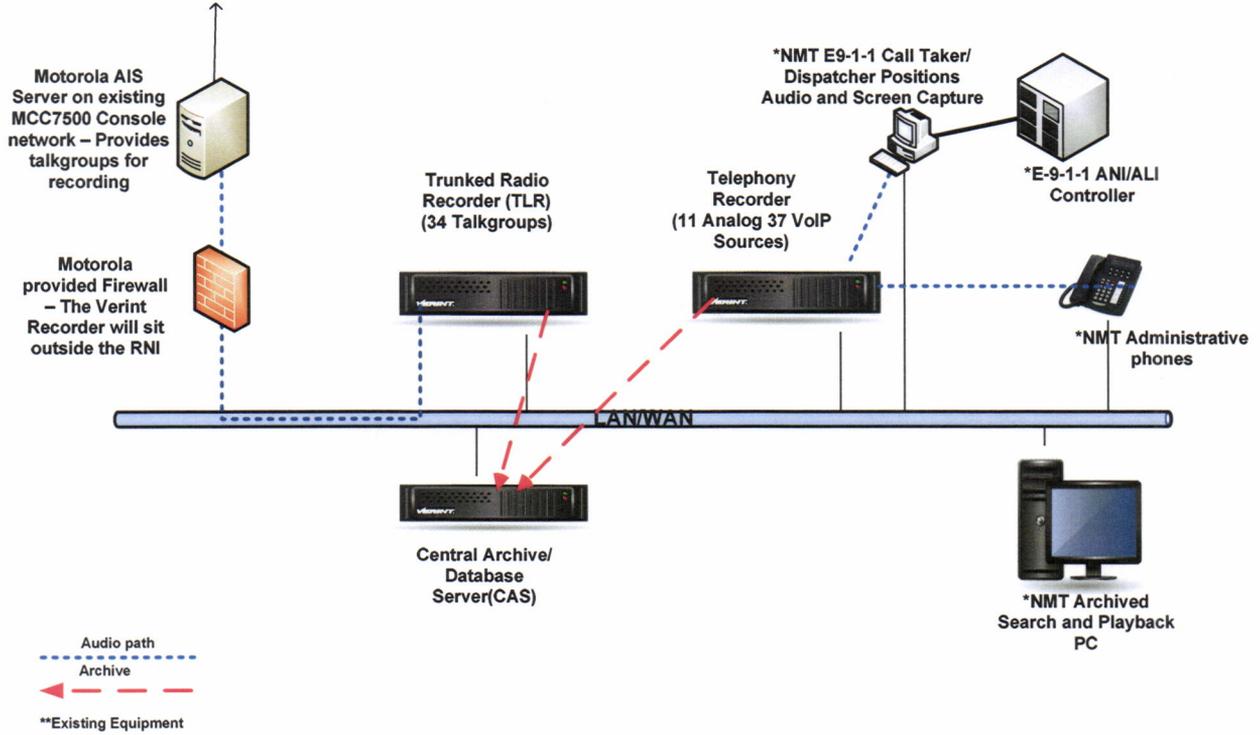
Joseph Glaccum, Director
Emergency Communication Center
and Technology
North Memorial Ambulance Service
North Memorial Health Care

North Memorial Logging Solution Overview

The logging solution for North Memorial will consist of the following components:

- Motorola Archiving Interface Server (AIS). The AIS will be added to the existing MCC7500 console system and will interface to the Radio Network (RNI) on the existing switch. The AIS will obtain the talk group and metadata (such as radio ID, radio alias, talk group ID, talk group alias etc) information from the Master site via the existing site links. This talkgroup and metadata information will be passed onto the Verint Trunked Logging Recorder (TLR)
- Motorola Firewall. Motorola has included one firewall to interface between the MCC7500 RNI network and North Memorial's customer network equipment (CNE). The firewall will be programmed to only open the required ports to allow communication between the AIS and the Verint Trunked logging recorder.
- Verint Audiolog Trunked Logging Recording (TLR) Server. A dedicated Trunked Logging Recording (TLR) Server will be deployed to record up to 34 talk groups from the ARMER P25 Trunked Radio Communications. No encrypted talk groups will be able to be recorded as no encryption is included in the AIS. However, metadata such as radio ID, radio alias, talk group ID and talk group alias will also be recorded on the TLR server. This will enable users to search and retrieve recorded radio communications based upon talk group and/or radio information. The TLR server will be implemented on North Memorial's local network equipment (CNE).
- Verint Audiolog Telephony Recorder. A separate Audiolog telephony recorder will be deployed to capture 11 analog telephony resources and 37 VoIP resources. The Audiolog telephony recorder will be implemented on North Memorial's local network equipment (CNE).
- Verint Central Archive Server (CAS). Both the TLR and Telephony recorder will store recordings at a Central Archive Server (CAS). The CAS will be implemented on North Memorial's local network equipment (CNE).
- Search and Playback Capabilities. Verint's Insight Center application provides a browser-based, set of tools to search for and play the recordings stored on your Audiolog servers (TLR, Audiolog, and CAS) from your desktop PC. Playback audio is delivered via the local area network to the speakers of the client PC. North Memorial is responsible for providing the PC's on their network. The max number of simultaneous users for the Insight in the design for North Memorial is 5.
- No racks are included in the proposal from Motorola and Verint. All racking equipment is the responsibility of North Memorial. In addition, no KVM equipment is provided in the proposal. This is also the responsibility of North Memorial.

To existing MCC7500 Console Radio Network Switch





Stearns County Sheriff's Office

John Sanner, Sheriff • Bruce Bechtold, Chief Deputy

LAW ENFORCEMENT CENTER

807 Courthouse Square
P.O. Box 217
St. Cloud, MN 56302-0217

February 22, 2016

To: Chair Joe Glaccum, Operations and Technical Committee

FROM: Kristen Lahr, System Admin Stearns County

RE: Stearns Requested Site Access Profile – Site Addition

Stearns County is requesting Site 41 (St. Cloud Simulcast) be designated as a Requested Site in site access profile RGN-CM-ST-R.

The talkgroups currently utilizing RGN-CM-ST-R are as follows:

ST-LE1
ST-LE2
ST-FIRE
ST-LE-EMERG
ST-PANIC

Stearns County currently has backup consolettes affiliated to Site 41 for county mains (ST-LE1, ST-LE2, ST-FIRE) which carry the bulk of traffic. The impetus of this addition is to request traffic for ST-PANIC and ST-LE-EMERG for emergent response to calls on these talkgroups which are scanned in all county campus security/law/jail portables.

Stearns County has discussed this request with the City of St. Cloud and they have consented to the addition. This request was also reviewed and approved by the Central region at the February 18th meeting of Owners and Operators.

kkk



February 29, 2016

Operational and Technical Committee (OTC)

Subject: MCC7500 Interface Request

The LOGIS consortium is moving to a TriTech system for Computer Aided Dispatch and we have a desire to interface to the MCC7500 consoles for our member PSAPS. I've attached a diagram provided by LOGIS network staff after consultation with John Anderson. Below is the description of the interface provided by TriTech.

TriTech – Motorola MCC 7500 Interface Description

The Interface will function with 4 public safety answering points (PSAPS), Minnetonka, Bloomington, Dakota Communications Center and the Rice & Steele 911 Center. The interface calls for the installation of a small executable on the consoles. The TriTech executable running on the console exists to receive communication via TCP and call the corresponding function calls. The executable also receives the API messages, which can be sent back to our interface server via the TCP connection.

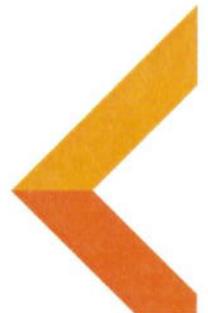
TriTech shall implement a radio interface to process incoming push-to-talk (PTT) events and emergency notifications from the Motorola radio system contingent upon the Motorola MCC 7500 API capabilities of the radio system. In addition to the PTT events and emergency notifications, the interface shall generate alerting/notification messages for stations upon unit dispatch events.

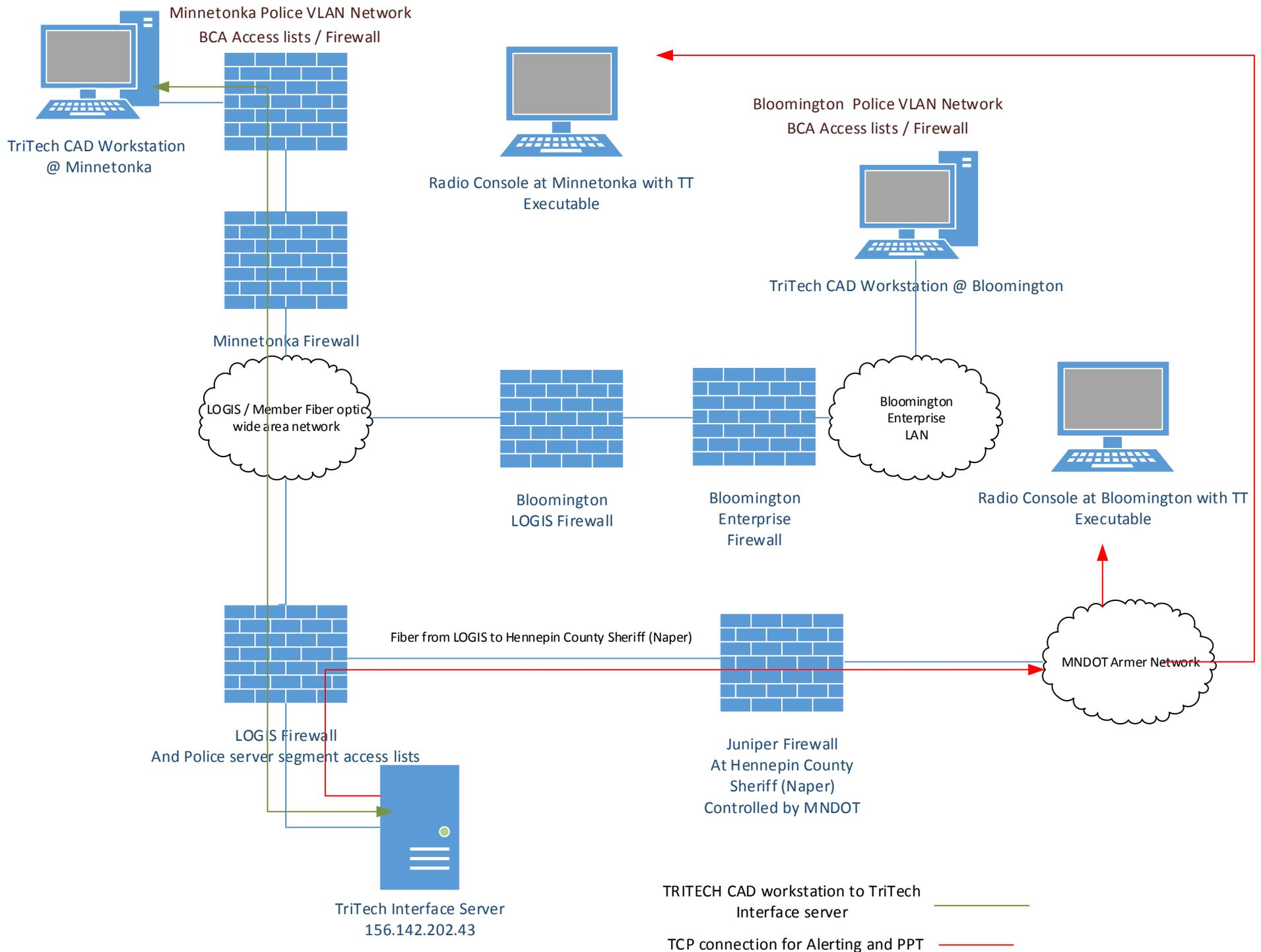
PTT Event Viewer: The Inform CAD radio interface shall forward the events to the Inform CAD system, matching each PTT radio event to the unit and/or person with which the radio is assigned, and providing a workstation display where the users can correlate radio dialog with the unit and/or person initiating the dialog.

Emergency Notification: The radio interface shall process emergency notification events from the radio system, forwarding them to the Inform CAD system. These notifications shall trigger the configured Inform CAD emergency notification functionality to alert dispatchers of the event. The information provided to the dispatcher indicates the unit initiating the event, the person assigned the radio, last known location of the unit, and incident reference when the unit has an assignment in Inform CAD.

Alerting/Notification: The interface shall generate alerting/notification messages for stations upon unit dispatch events. Alert messages will correspond to a "Page Alias" or "Page Alias Group" identified in the console as a representation of a station.

LOGIS is requesting OTC approval to move forward with installation and testing.





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

Document Section 1	Management of System	Status: Complete
State Standard Number	1.1.0	
Standard Title	Operational Management	
Date Established	08/07/2001	SRB Approval: 03/03/2005
Replaces Document Dated	03/03/2005	
Date Revised	02/08/2016	

1. Purpose or Objective

The purpose of this standard is to define agency roles in the operational management of the ARMER System.

2. Technical Background

- **Capabilities**
- **Constraints**

3. Operational Context

Each subsystem owner and interconnected dispatch system owner will formally designate a Subsystem Administrator. This Administrator will have the authority to represent their respective agency/agencies' interests and make decisions on issues related to the day-to-day operation of the system and any urgent or emergency system operational or repair decisions. The Statewide System Administrator will represent the state-owned portion of the system. Each System Administrator shall designate a backup, who will have the authority to represent their respective Subsystem in the absence of the primary System Administrator.

An urgent or emergency situation would be where immediate decision authority is needed to allow the system as a whole, or any of the subsystem components, to continue supporting normal wide-area communications services. It is recognized that each System Administrator may have to obtain authorizations from higher levels of their own organization to make longer-term or non-emergency capital or repair expenditure decisions.

Each System Administrator will be responsible for the day-to-day management, operation, and oversight of the system components within their portion of the system. While specific duties will not be detailed in this document, the general duties will include:

- Monitoring the system and its components for normal operations.
- Participating in the diagnosis of system performance problems and the development of corrective action recommendations.
- Dispatching appropriate repair services in the event of a malfunction in system equipment.
- Managing the database elements, including subscriber ID's, talkgroup ID's, console ID's, and the various parameters that relate to their effective operation.

Due to the complexity and distributed administration and maintenance of the system, problems can appear when changes are made to hardware or software. In order to keep all representatives informed of any updates, notifications will need to be sent to all primary and alternate System Administrator representatives in the event of any of the following:

- Any planned maintenance work being done on the regional or subsystem systems that would affect the system performance for other representatives should be preceded with reasonable notification of the maintenance work being done.
- Any equipment malfunctions or failures that would affect system performance for other representatives of the subsystems or regional system.
- Any configuration changes in equipment or software by any one of the representatives that may affect system performance for the other representatives.

In addition to the responsibilities as a System Administrator, the Statewide System Administrator will also be responsible for:

- System Administrator meetings, at least periodically, to review operations of the system and share ideas or issues with their respective subsystems that may be of interest to the other System Administrators.
- Being available to work with any other System Administrators or technical staff of any of the subsystems to diagnose and resolve system operational problems that involve parameter changes, maintenance, or repair of equipment.
- Being the identified point of contact with Motorola for issues related to the network equipment.
- Providing timely information to other System Administrators about system equipment repair or maintenance issues.

- Monitoring the performance of the entire network for normal operations, particularly the performance of the equipment.
- Monitoring the configuration of the system database for normal operations, particularly the properties of the equipment and database objects, in addition to conducting periodic database backups.

4. Recommended Protocol/ Standard

This is an ongoing process for the management of the system.

5. Recommended Procedure

If specific procedures for performing these functions are not defined in other State Standards, they are at the discretion of the Operations & Technical Committee (OTC.)

The System Management resource manuals are classified as “Security Information” and “General Non-Public Data,” pursuant to Minn. Stats. §13.37, Subd. 1a.

6. Management

The Statewide System Administrator or their designee is responsible for the operational management of the system.

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

Document Section 1	Management of System	Status: Complete
State Standard Number	1.1.0	
Standard Title	Operational Management	
Date Established	08/07/2001	SRB Approval: 03/03/2005
Replaces Document Dated	09/12/2001 03/03/2005	
Date Revised	03/03/2005 02/08/2016	

1. Purpose or Objective

The purpose of this standard is to define agency roles in the operational management of the ARMER System.

2. Technical Background

- **Capabilities**
- **Constraints**

3. Operational Context

Each subsystem owner and interconnected dispatch system owner will formally designate a Subsystem Administrator. This Administrator will have the authority to represent their respective agency/agencies' interests and make decisions on issues related to the day-to-day operation of the system and any urgent or emergency system operational or repair decisions. The ~~Statewide Minnesota Department of Transportation (MnDOT)~~ System Administrator will represent the ~~state-owned regional infrastructure~~ portion of the system. Each System Administrator shall designate a backup, who will have the authority to represent their respective Subsystem in the absence of the primary System Administrator.

An urgent or emergency situation would be where immediate decision authority is needed to allow the system as a whole, or any of the subsystem components, to continue supporting normal wide-area communications services. It is recognized that each System Administrator may have to obtain authorizations from higher levels of their own organization to make longer-term or non-emergency capital or repair expenditure decisions.

Each System Administrator will be responsible for the day-to-day management, operation, and oversight of the system components within their portion of the system. While specific duties will not be detailed in this document, the general duties will include:

- Monitoring the system and its components for normal operations.
- Participating in the diagnosis of system performance problems and the development of corrective action recommendations.
- Dispatching appropriate repair services in the event of a malfunction in system equipment.
- Managing the database elements, including subscriber ID's, talkgroup ID's, console ID's, and the various parameters that relate to their effective operation.

Due to the complexity and distributed administration and maintenance of the system, problems can appear when changes are made to hardware or software. In order to keep all representatives informed of any updates, notifications will need to be sent to all primary and alternate System Administrator representatives in the event of any of the following:

- Any planned maintenance work being done on the regional or subsystem systems that would affect the system performance for other representatives should be preceded with reasonable notification of the maintenance work being done.
- Any equipment malfunctions or failures that would affect system performance for other representatives of the subsystems or regional system.
- Any configuration changes in equipment or software by any one of the representatives that may affect system performance for the other representatives.

In addition to the responsibilities as a System Administrator, the Statewide MnDOT System Administrator will also be responsible for:

- System Administrator meetings, at least periodically monthly, to review operations of the system and share ideas or issues with their respective subsystems that may be of interest to the other System Administrators.
- Being available to work with any other System Administrators or technical staff of any of the subsystems to diagnose and resolve system operational problems that involve parameter changes, maintenance, or repair of equipment.
- Being the identified point of contact with Motorola for issues related to the network equipment.
- Providing timely information to other System Administrators about system equipment repair or maintenance issues.

- Monitoring the performance of the entire network for normal operations, particularly the performance of the equipment.
- Monitoring the configuration of the system database for normal operations, particularly the properties of the equipment and database objects, in addition to conducting periodic database backups.

4. Recommended Protocol/ Standard

This is an ongoing process for the management of the system.

5. Recommended Procedure

If specific procedures for performing these functions are not defined in other State Standards, ~~procedures~~, they are at the discretion of the ~~System Managers Group (SMG)-Operations & Technical Committee (OTC.)~~

The System Management resource manuals are classified as “Security Information” and “General Non-Public Data,” pursuant to Minn. Stats. §13.37, Subd. 1a.

6. Management

The ~~Statewide System Administrator or their designee~~ ~~SMG~~ is responsible for the operational management of the system.

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

Document Section 3	Interoperability Standards	Status: Complete
State Standard Number	3.16.2	
Standard Title	Use of Statewide 800MHz STAC 1-12 Talkgroups - Air Ambulance Emergency Landing Zone Coordination	
Date Established	07/11/2007	SRB Approval: 3/28/2013
Replaces Document Dated	- 03/19/2013	
Date Revised	- 02/08/2016	

1. Purpose or Objective

The purpose of this standard is to specify the use of the statewide 800 MHz STAC talkgroups for establishing and maintaining air ambulance emergency landing zones.

2. Technical Background

▪ Capabilities

The Statewide Emergency Communications Board (SECB) has established a standard for use of the STAC talkgroups in State Standard 3.16.0. This State Standard encourages interoperable communications among first responders and establishes common statewide talkgroups to facilitate interoperability. The statewide talkgroups authorized for non-encrypted communication between service branches are STAC1 through STAC12.

▪ Constraints

Experience has shown that all agencies have used many different processes in the past. This standard strives for consistency among all agencies.

3. Recommended Procedure

If a scene landing is required, it is imperative to allow for communication between the responding aircraft and a single qualified person (law enforcement, fire personnel, first responder, etc.) on the ground that will be coordinating the landing zone (LZ). The exact location of the LZ, any hazards, wind direction, and any other pertinent information needs to be communicated to the aircraft to allow for a safe scene landing. If it becomes necessary to abort the landing, the individual on the ground will need to be able to quickly communicate this information to the aircraft.

For Aircraft that are equipped with ARMER radios:

If the aircraft and personnel on scene coordinating the landing both have STAC talkgroups, they may use the STAC that has been assigned to them by the appropriate, controlling primary Public Safety Answering Point (PSAP).

In the event of a technical constraint, the incident may be switched over to other talkgroups as appropriate.

For Aircraft that are NOT equipped with ARMER radios:

If the aircraft does not have ARMER radios, but personnel on scene coordinating the landing do, the controlling, primary PSAP will assign an STAC and patch the responding air ambulance operating to VLAW31 or VFIRE23. Note: PSAPs will patch to VHF resources according to their local protocol.

Note: An announcement on the patched resources will be made at the time of the patch origin AND just prior to the patch removal.

Order of Use of STAC Talkgroups (per State Standard 3.16.0):

The use of STAC talkgroups for **PREPLANNED NON-EMERGENCY** interoperability events involving LZ coordination should be STAC12, 11, 10, 9, etc., in that order. **For users who do not have the full complement of STAC talkgroups programmed in their radios, these non-emergency LZ events should be assigned the “highest” number STAC first (i.e., STAC8, 7, 6, 5.)**

The use of STAC talkgroups for **UNPLANNED EMERGENCY** incidents involving LZ coordination should be STAC1, 2, 3, 4, etc., in that order.

4. Management

Nothing in this standard shall be construed as a limitation of use of the STAC talkgroups for incidents other than air ambulance emergency landing zone coordination.

Nothing in this standard shall be construed as a limitation of use of the conventional resource VLAW31 or VFIRE23 or any other appropriately assigned conventional resource for an air ambulance emergency landing zone coordination by non-ARMER users.

For Management, see State Standard 3.16.0 for additional information.

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

Document Section 3	Interoperability Standards	Status: Complete
State Standard Number	3.16.2	
Standard Title	Use of Statewide 800MHz STAC 1-12 Talkgroups - Air Ambulance Emergency Landing Zone Coordination	
Date Established	07/11/2007	SRB Approval: 3/28/2013
Replaces Document Dated	07/02/2008- 03/19/2013	
Date Revised	03/19/2013- 02/08/2016	

1. Purpose or Objective

The purpose of this standard is to specify the use of the statewide 800 MHz STAC talkgroups for establishing and maintaining air ambulance emergency landing zones.

2. Technical Background

▪ Capabilities

The Statewide Emergency Communications Board (SECB) has established a standard for use of the STAC talkgroups in State Standard 3.16.0. This State Standard encourages **interoperable** communications **interoperability** among first responders and establishes common statewide talkgroups to facilitate interoperability. The statewide talkgroups authorized for non-encrypted communication between service branches are STAC1 through STAC12.

▪ Constraints

Experience has shown that all agencies have used many different processes in the past. This standard strives for consistency among all agencies.

3. Recommended Procedure

If a scene landing is required, it is imperative to allow for communication between the responding aircraft and a **single** qualified person (law enforcement, fire personnel, first responders, etc.) on the ground that will be coordinating the landing zone (LZ). The exact location of the LZ, any hazards, wind direction, and any other pertinent information needs to be communicated to the aircraft to allow for a safe scene landing. If it becomes necessary to abort the landing, the individual on the ground will need to be able to quickly communicate this information to the aircraft.

For Aircraft that are equipped with ARMER radios:

If the aircraft and personnel on scene coordinating the landing both have STAC talkgroups, they may use the STAC that has been assigned to them by the appropriate, controlling primary Public Safety Answering Point (PSAP).

In the event of a technical constraint, the incident may be switched over to other talkgroups as appropriate.

For Aircraft that are NOT equipped with ARMER radios:

If the aircraft does not have ARMER radios, but personnel on scene coordinating the landing do, the controlling, primary PSAP will assign an STAC and patch the responding air ambulance operating to VLAW31 or VFIRE23. Note: PSAPs will patch to VHF resources according to their local protocol.

Note: An announcement on the patched resources will be made at the time of the patch origin AND just prior to the patch removal.

Order of Use of STAC Talkgroups (per State Standard 3.16.0):

The use of STAC talkgroups for **PREPLANNED NON-EMERGENCY** interoperability events involving LZ coordination should be STAC12, 11, 10, 9, etc., in that order. ~~as of June 26, 2015. INTERIM: Prior to June 26, 2015, when all~~ For users **who do not have the full complement of STAC talkgroups may not have all 12 STACs programmed in their radios, these non-emergency LZ events should be assigned the “highest” number STAC first (i.e., STAC8, 7, 6, 5.) STAC4, 3, 2, 1 in that order.**

The use of STAC talkgroups for **UNPLANNED EMERGENCY** incidents involving LZ coordination should be STAC1, 2, 3, 4, etc., in that order.

4. Management

Nothing in this standard shall be construed as a limitation of use of the STAC talkgroups for incidents other than air ambulance emergency landing zone coordination.

Nothing in this standard shall be construed as a limitation of use of the conventional resource VLAW31 or VFIRE23 or any other appropriately assigned conventional resource for an air ambulance emergency landing zone coordination by non-ARMER users.

For Management, see State Standard 3.16.0 for additional information.

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

Document Section 3	Interoperability Standards	Status: Complete
State Standard Number	3.28.0	
Standard Title	Use of Statewide Emergency Management Talkgroup SEMTAC	
Date Established	06/28/2006	SRB Approval: 04/26/2007
Replaces Document Dated	06/28/2006	
Date Revised	04/10/2007	

1. Purpose and Objective

The purpose of this standard is to establish operational policy for use of the Statewide Emergency Management Talkgroup, SEMTAC. This talkgroup is a shared resource that allows interoperability between Emergency Managers, their respective Emergency Operations Centers (EOC), and other key partners for the purpose of Emergency Management Coordination.

The intention of this talkgroup is to allow Emergency Managers to communicate with one another and to connect EOCs, as well as Emergency Management Field Operations, until another talkgroup is assigned, if needed. The talkgroup may be used for direct communication in an ongoing, daily basis, depending on the operation. The talkgroup may also be used for large-scale coordination during a disaster for regional resources, agencies, EOCs, etc., or to facilitate coordination between many different partners.

2. Technical Background

- **Capabilities**
- **Constraints**

3. Operational Context

Emergency Managers and their partners may need to coordinate operations, resources, etc., across a large multi-jurisdictional area of the state. Emergency Managers and their partners may need to utilize the SEMTAC talkgroup for ongoing daily business (event dependent), as well as operations and planning during an incident.

4. Recommended Protocol/Standard

Talkgroup requirements

- Highly recommended for Emergency Management personnel at the state, county, and local levels, as well as those partners that routinely work with Emergency Management, such as National Weather Service (NWS).
- ~~Optional for public safety agencies~~

Commented [AC1]: they partner with EM statewide - good way to get to them.

Commented [AC2]: does public works count as public safety agency .

standard of system and original lang. pub works was considered part of pub safety but purpose of this standard is more law, fire, ems.

statute 403.02, sub 18
public safety agency - provides ff police, medical or other emergency medical services.

363a.03 sub 35 public service - any public facility, board commission owned, or managed by ---

If an Emergency Manager or their partner needs to talk to another Emergency Manager or partner, they should identify themselves, their agency, and who they are calling by agency or name.

It is up to each agency Emergency Manager or partner to monitor the SEMTAC talkgroup.

5. Recommended Procedure

N/A

6. Management

The Minnesota Division of Homeland Security and Emergency Management (HSEM) will be responsible for ensuring compliance and use of these resources.

Allied Radio Matrix for Emergency Response Standards, Protocols, Procedures

Document Section 3	Interoperability Standards	Status: Complete
State Standard Number	3.28.2	
Standard Title	Use of Duty Officer Talkgroup, MNDO	
Date Established	5-23-2012	SRB Approval: 9/27/2012
Replaces Document Dated		
Date Revised		

1. Purpose or Objective

The purpose of this standard is to establish procedures for the use of the Minnesota Duty Officer Talkgroup, MNDO

2. Technical Background

- **Capabilities**
- **Constraints**

3. Operational Context

MNDO is a statewide, accessible talkgroup that is monitored 24 hours a day, 7 days a week, at the Duty Officer console.

4. Recommended Protocol/ Standard

MNDO is available to be programmed into dispatch consoles, Emergency Operations Center (EOC) consoles/radios, and any field user radio where contact with the Duty Officer (DO) may be needed. Consideration should be given to planning for situations where phone service may be lost or when operations will be in areas with incomplete/inadequate cell phone coverage or capacity.

5. Recommended Procedure

The preferred method of contact for the Duty Officer is landline or cell phone at the toll-free number, 800-422-0798, or 651-649-5451, within the metro area. During operations in areas with incomplete/inadequate cell phone coverage, the MNDO talkgroup may be used. Communications should be limited to necessary requests for state assistance, hazmat, and spill reporting.

6. Management

The Minnesota Division of Homeland Security and Emergency Management (~~MN~~-HSEM), Division of Emergency Communication Networks (DECN), and local system administrators will be responsible for management of this standard and problem resolution.

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

Document Section 4	Maintenance	Status: Complete
State Standard Number	4.10.0	
Standard Title	System Maintenance: Programming and Qualifications	
Date Established	7/22/2003	SRB Approval: 2/28/2008
Replaces Document Dated	2/28/2008	
Date Revised	2/22/2016	

1. Purpose or Objective

The purpose of this standard is to establish minimum qualification requirements for system technical staff, both in-house and contracted. This will ensure that functionality and integrity is maintained by requiring system configuration, maintenance, and repair functions be performed by qualified personnel.

2. Technical Background

▪ Capabilities

This standard protects the integrity of the system by ensuring training and background requirements of all personnel working on the system and by describing the authorized activities of a contract service provider who is to provide maintenance and programming services.

▪ Constraints

Some sensitive and non-public system security information will be available to businesses and people operating outside the ARMER System. It is possible that the integrity of the system may be jeopardized if no standard or agreement is in place to ensure the appropriateness of the businesses' activities.

3. Operational Context

System functionality and integrity must be maintained by ensuring that only qualified personnel perform system configuration, maintenance, and repair functions. Not all user agencies participating in the statewide ARMER system have technicians on staff to program and perform configuration, maintenance, and repair on radios and other electronic infrastructure. Agencies may need to contract with one or more service providers for these services. The choice of service provider is at the discretion of the user agency, but the contract service provider must enter into an agreement with the user agency, and the user agency must ensure the requirements of this standard are met prior to execution of the service.

4. Recommended Protocol/ Standard

System Owners' Internal Technical Staff

Employed technical staff of owning agencies will follow the same or an equivalent internal process of ensuring absence of criminal history, as outlined below in the Contract Service Providers section. All employees who have physical or logical access to systems with Criminal Justice Information must pass a fingerprint based background check and complete the Security Access Training and certification exam.

-
- Employed technical staff of owning agencies will follow the same process of ensuring technical competency, as outline below in the Technical Staff Requirements (Internal and External) section.
- Each ARMER system participation plan holder will formally designate a System Administrator. See Standard 1.11.1, Training System Administrators. This Administrator will have the authority to represent their respective agency/agencies' interest and make decisions on issues related to the day-to-day operation, maintenance, and repair of their equipment. See Standard 1.1.0, Operational Management.
- System Administrators shall maintain a list of technical training completed by internal technical staff.

Contract Service Providers

User agencies may contract radio programming and system infrastructure work, provided the following requirements are met:

- A service shop must prove it is a qualified service center eligible to conduct business in the state of Minnesota.
- A service shop must prove it has specified insurance coverage and may, prior to commencement of work, be asked to purchase a security bond by the user agency.
- All contract service provider employees who have physical or logical access to systems with Criminal Justice Information must pass a fingerprint based background check and complete the Security Access Training and certification exam to comply with the CJIS Security Policy requirement.
- When a user agency contracts with a contract service provider for the purpose of providing maintenance, repair, programming, and related service on electronic infrastructure to include dispatch consoles and/or radio subscriber equipment, the service provider must obtain and pay for all permits, licenses, and approvals necessary for programming and maintenance to fulfill the provisions.
- Due to the sensitive and non-public nature of the programming information, the contract service provider must provide written assurance that it is authorized and has all necessary permits and licenses to conduct business in the state of Minnesota. Unless

specifically authorized by the System Administrator, in writing and on an individual radio-by-radio basis, the contract service provider may not directly or indirectly permit any third person to view, read, print, extract, copy, transmit, archive, edit, create, clone, transfer, release, tamper with, reverse engineer, or otherwise compromise the security of any radio code plug programming file, system key file, encryption key file, or any infrastructure configuration database file for any radio, console, or other infrastructure element on the system.

- The contract service shop must provide references and enter into a provider agreement with the requesting agency. The System Administrator and/or the user agency have the right to view the resume of any staff member of the contract service provider or to conduct background checks.
- The contracted technician must submit to a background check. The contracting agency is responsible to ensure the background check has occurred.
- Contracting agencies shall use the contract service provider's technical staff in their certified areas of competency.
- The contract service provider shall maintain all training certifications for its personnel and provide copies of these certifications to System Administrators when requested.
- Contracting agencies may contract for services only for equipment they have jurisdiction over.
- Contracting agencies shall notify the appropriate System Administrator of any contract for services. The appropriate System Administrator is the Administrator of the system or subsystem the agency has contracted with to be operating on. For example, subscriber-only agencies contracted with Hennepin County must notify the Hennepin County System Administrator, and a regional subscriber-only user contracted with a Regional Emergency Communications Board (ECB) or Emergency Services Board (ESB) or the Minnesota Department of Transportation (MnDOT) must notify the Statewide System Administrator.

Technical Staff Requirements (Internal or External)

- The technical staff that is assigned to work on system and/or subsystem equipment shall successfully complete appropriate training on all equipment they are assigned to work on. This training will be completed prior to working on the equipment.
- Personnel who are not trained shall not perform configuration, maintenance, or repair work unless this work is performed under the direct supervision of trained and approved personnel.
- The technicians must attend a common practices class and any informational meetings as specified by the System Administrator before they may work on the system or program radios for use on the system.

- Technicians shall only work in the areas which they have completed the common practice classes or informational meetings.
- Technicians must be familiar with and abide by ARMER standards established by the Statewide Emergency Communications Board (SECB), including but not limited to, the standards contained in Section Four that pertain to maintenance, as well as any relevant regional standards.
- System and subsystem technical staff shall be familiar with the site access procedures, equipment outage, and maintenance notification requirements of the State Standards.
- System and subsystem technical staff shall have access to and use radios for required Sys-Tech announcements before performing any work on the system.
- Technical staff connecting to the radio network shall have a clean computer and follow all standards regarding security. Before they connect to the network, they shall work with the appropriate System Administrator to ensure they have the latest anti-virus protection on their computers.

5. Recommended Procedure

This Standard does not contain specific training procedures or training modules.

Agencies requiring contract services must enter into an agreement with the contractor providing service. The agreement will specify enforcement provisions, including consequences of misuse and the release of non-public system security information.

The contract service provider's technical staff must attend the common practices/system overview class and any other training as determined by the System Administrator.

6. Management

The Statewide System Administrator, the appropriate System Administrators, and the contracting agencies are responsible for managing and maintaining the agreement process.

The Statewide System Administrator will:

- Facilitate the development of and maintain the current version of the common practices for the different categories of work.
- Maintain a list of the overview/common practices trainers for the contract workers.

System Managers are responsible to ensure that:

- Minimum training requirements of in-house staff are met.
- Only qualified personnel perform system maintenance functions.
- System technicians are familiar with all applicable sections of the ARMER system standards.

- Lists of technical contractors in use are to be submitted to the Statewide System Administrator.

Contracting Agencies shall:

- Ensure that these system standards are followed when using contract services.
- Ensure that only qualified personnel perform system maintenance work.
- Notify the System Administrator when contracting for service.

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

Document Section: 4	4 —Maintenance	Status: Complete
State Standard Number	State 4.10.0	
Sub-Section: Standard Procedure Title:	System Maintenance: Programming and Qualifications	
Date Established:	7/22/2003	SRB Approval: 2/28/2008
Replaces Document Dated:	2/12/2008 2/28/2008	
Date Revised:	2/28/2008 2/22/2016	

Formatted: Font: Bold

1. Purpose or Objective

The purpose of this standard is to establish ~~the~~ minimum qualification requirements for system technical staff, both in-house and contracted. This will ensure that functionality and integrity is maintained by requiring system configuration, maintenance, and repair functions be performed by qualified personnel.

2. Technical Background

▪ Capabilities _____

This standard ~~is to protect~~s the integrity of the system by ensuring training and background requirements of all personnel working on the system and by describing the authorized activities of a contract service provider who is to provide maintenance and programming services.

Formatted: Tab stops: 0.25", Left

▪ Constraints

Some sensitive and non-public system security information will be available to businesses and people operating outside ~~of~~ the ARMER System. It is possible that the integrity of the system may be jeopardized if no standard or agreement is in place to ~~en~~assure the appropriateness of the businesses' activities.

Formatted: Bulleted + Level: 1 + Aligned at: 0" + Indent at: 0.25", Tab stops: 0.25", Left

3. Operational Context:

System functionality and integrity must be maintained by ensuring that only qualified personnel perform system configuration, maintenance, and repair functions. Not all user agencies participating in the ~~statewide region wide~~ ARMER system have technicians on staff to program and perform configuration, maintenance, and repair on radios and other electronic infrastructure. ~~Agencies may need to~~ ~~This presents the need for agencies to~~ contract with ~~contract one or more~~ service provider(s) ~~for to perform these~~ such service(s). The choice of service provider is at the discretion of the user agency, but the contract service provider must enter into an agreement with the user agency, ~~requiring services~~ and the user

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

agency must ~~en~~insure ~~that~~ the requirements of this standard are met prior to ~~the~~ execution of the service.

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

4. Recommended Protocol/ Standard:

System Owners' Internal Technical Staff

Employed technical staff of owning agencies will follow the same or an equivalent internal process of enassuring absence of criminal history, as outlined below in the section: Contract Service Providers section. The minimum standard for criminal history checks will be the Interstate Identification Index. All employees who have physical or logical access to systems with Criminal Justice Information must pass a fingerprint based background check and complete the Security Access Training and certification exam.

Formatted: Font: Not Italic

Formatted: Highlight

-
-

Formatted: No bullets or numbering

- Employed technical staff of owning agencies will follow the same process of enassuring technical competency, as outline below in the section: Technical Staff Requirements (Internal and External) section.

Formatted: Font: Not Italic

Formatted: Indent: Left: 0.25", No bullets or numbering

- Each ARMER system participation plan holder will formally designate a System Administrator. See Standard 1.11.1, Training System Administrators. This Administrator will have the authority to represent their respective agency/agencies' interest and make decisions on issues related to the day-to-day operation, maintenance, and repair of their equipment. See Standard 1.1.0, Operational Management.

Formatted: Highlight

Commented [AC1]: who does mndot call - system manager. state and other statute calls responsible party. single point of contact. back to pp holder, whether sheriff, co board, co administrator.

- System Administrators System managers shall maintain a list of technical training completed by internal technical staff.

Commented [AC2]: no ownership by ancom, etc. they just can make a change - not responsible as ownership. if ancom was doing DCC, they would just add 2 consoles and not update PP. Shouldb e internl has to follow suit. IF actually were holder of PP would be implied they would be SA foa group . IF hired for specific detail, can see that happening with small agency. VA, FED RES - with handful of radios.

Contract Service Providers

User agencies may contract radio programming and system infrastructure work, to contract service providers provided the following requirements are met:

Formatted: Highlight

Formatted: Highlight

Formatted: Highlight

Formatted: Highlight

Commented [AC3]: have a lot of outstate that don't have much, if any, investment in infrastructure portion other than consoles, etc.

- A service shop must prove it is a qualified service center eligible to conduct business in the sState of Minnesota.

Formatted: No bullets or numbering

- A service shop must prove it has specified insurance coverage and may, prior to commencement of work, be asked to purchase a security bond by the at the discretion of the user agency, that is hiring the service shop.

Formatted: Indent: Left: 0.25", No bullets or numbering

Formatted: Highlight

- All contract service provider employees who have physical or logical access to systems with Criminal Justice Information must pass a fingerprint based background check and complete the Security Access Training and certification exam to comply with the CJIS Security Policy requirement.

Formatted: Highlight

Formatted: Indent: Left: 0.25", No bullets or numbering

- When a user agency contracts with a contract service provider for the purpose of providing maintenance, repair, programming, and related service on electronic

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

infrastructure ~~to~~ including dispatch consoles and/or radio subscriber equipment, ~~the said contract~~ service provider must obtain and pay for all permits, licenses, and approvals necessary for programming and maintenance ~~and~~ to fulfill the provisions, ~~the user agency~~.

- Due to the sensitive and non-public nature of the programming information, the contract service provider must provide written assurance that it is authorized and has all necessary permits and licenses to conduct business in the state of Minnesota. Unless specifically authorized by the System Administrator ~~and user~~, in writing ~~and~~ on an individual radio ~~by radio~~ basis, the contract service provider may not directly or indirectly, ~~or~~ permit any third person to: view, read, print, extract, copy, transmit, archive, edit, create, clone, transfer, release, tamper with, reverse engineer, or otherwise compromise the security of any radio code plug programming file, system key file, encryption key file, or any infrastructure configuration database file for any radio, console, or other infrastructure element on the ~~s~~System.

Formatted: Highlight

The

- ~~Further, the~~ contract services shop must provide references and enter into a provider agreement with the requesting agency. The System Administrator and/or the user agency have the right to view the resume of any staff member of the contract service provider or to conduct background checks.
- The contracted technician must submit to a background check. The contracting agency is responsible to ensure ~~that~~ the background check has occurred.
- Contracting agencies shall use ~~the~~ contract service provider's technical staff in their certified areas of competency.
- The contract service provider shall maintain all training certifications for its personnel and provide copies of these certifications to ~~S~~system ~~A~~administrators when requested.
- Contracting agencies may contract for services only for equipment they have jurisdiction over.
- Contracting agencies shall notify the appropriate ~~S~~ystems ~~A~~administrator of any contract for services. The appropriate ~~S~~ystem ~~A~~administrator is the ~~A~~administrator of the system or subsystem the agency has contracted with to be operating on. ~~For example, Ex: s~~Subscriber-~~s~~ only agencies contracted with Hennepin County must notify the Hennepin County ~~S~~ystem ~~A~~administrator, ~~and a~~ regional subscriber-~~only~~ user contracted with a ~~R~~egional ~~E~~mergency Communications Board (ECB) or ~~E~~mergency Services Board (ESB) ~~board~~ or ~~the Minnesota Department of Transportation (Mn/DOT)~~ must notify the Statewide System Administrator.

Technical Staff Requirements (Internal or External)

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

- The technical staff that is assigned to work on system and/or subsystem equipment shall successfully complete appropriate training on all equipment they are assigned to work on. This training will be completed prior to working on the equipment.

- ~~The technician must have/possess satisfactory knowledge and experience in either the equipment being maintained or radio programming.~~

Formatted: Highlight

- Personnel ~~who~~that are not trained shall not perform configuration, maintenance, or repair work unless this work is performed under the direct supervision of trained and approved personnel.

- The technicians must attend a common practices class and any informational meetings as specified by the System Administrator before they may work on the system or program radios for use on the system.

- Technicians shall only work in the areas which they have completed the common practice classes or informational meetings.

- Technicians must be familiar with and abide by ARMER standards established by the Statewide ~~Emergency Communications Board (SECB) Radio Board~~, including, but not limited to, the standards contained in Section Four that pertain to maintenance, ~~as well as and any relevant/pertinent~~ regional standards.

Commented [AC4]: I only changed this because pertain is earlier in the sentence. Didn't sound as good to have to 'pert' words....

- System and subsystem technical staff shall be familiar with the site access procedures, equipment outage, and maintenance notification requirements of ~~the State Standards. is standards manual.~~

- System and subsystem technical staff shall have access to and use radios for required Sys-Tech announcements before performing any work ~~on~~the system.

- Technical staff connecting to the radio network shall have a clean computer and ~~be familiar with and~~ follow all standards regarding security. Before they connect to the network, they shall work with the appropriate ~~S~~system ~~A~~administrator to ~~e~~nsure they have the latest anti-virus protection on their computers.

5. Recommended Procedure:

This ~~Standard manual~~ does not contain specific training procedures or training modules.

Formatted: Highlight

Agencies requiring contract services must enter into an agreement with the ~~c~~Contractor providing service. The agreement will specify enforcement provisions, including consequences of misuse and the release of non-public system ~~security information~~security information.

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

The contract service provider's technical staff must attend the common practices/system overview class and any other training as determined by the System Administrator.

Commented [AC5]: otc would be level we'd go to for enforcement issues - informally or OTC formally.

Commented [AC6]: force compliance off of 1.11.1 if leave as system admin. allows local sa to put in higher level of training than what overall sa has called for. if sa calls for higher training, local sa better make sure they are trained at higher level. PP's went thru that listed maintenance agency as their SA. (3 in NE region). If they truly are SA, if ssa throws out they must be trained to this...

6. Management

The Statewide System Administrator, the appropriate System ~~Administrators~~Managers, and the contracting agencies are responsible for managing and maintaining the agreement process.

The Statewide System Administrator will:

- ~~Will~~ Facilitate the development of and maintain the current version of the common practices for the different categories of work.
- Maintain a list of the overview/common practices trainers for the contract workers.

System Managers are responsible to ensure that:

- Minimum training requirements of in-house staff are met.
- Only qualified personnel perform system maintenance functions.
- System technicians are familiar with all applicable sections of the ARMER system standards.
- Lists of technical contractors in use are to be submitted to the Statewide System Administrator.

Contracting Agencies shall:

- ~~E~~nsure that these system standards are followed when using contract services.
- ~~E~~nsure that only qualified personnel perform system maintenance work.
- Notify the System Administrator when contracting for service.

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%

Formatted: Font: Times New Roman, Font color: Gray-50%



Minnesota Dispatchers

Communications Best Practice Guide

Statewide Radio Board, Operations & Technical Committee, Interoperability
Committee, Dispatch Best Practice Workgroup

Approved by the Statewide Radio Board

(DATE)

This document describes the recommended best practice, standards, and contact information for Minnesota dispatchers to assist in planning for interoperability with other public safety disciplines.



Table of Contents

Section I: Introduction

- Dispatchers Best Practice Workgroup

Section II: Participation in ARMER

- State Standard 1.10.0, Requesting and Configuring Participation
- Agency's Participation Plan

Section III: ARMER Basics for Dispatchers

- State Standard 1.11.3, Training Dispatchers
- Alexandria Technical & Community College Training Modules
 - Radio 101
 - History of ARMER
 - Interoperability 101
 - Interoperability: How to Communicate Outside Your Agency
 - Computer Basics for Dispatchers
 - Dispatcher Technology Part I
 - Dispatcher Technology Part II
- FEMA NIMS Courses (in this order)
 - IS-100.b, Introduction to the Incident Command System (ICS-100) (Required)
 - IS-700.a, National Incident Management System (NIMS), An Introduction (Required)
 - IS-200.b, ICS for Single Resources and Initial Action Incidents (ICS 200) (Required)
 - IS-800.B, National Response Framework, An Introduction (ICS 800) (Recommended)
- Attending Field User ARMER Training

Section IV: ARMER Console Operation

- Alexandria Technical & Community College Training Modules
 - CentraComm Dispatch Console, Part I (until 5/15/2016)
 - CentraComm Dispatch Console, Part II (until 5/15/2016)
 - MCC7500 Dispatch Console, Part I
 - MCC7500 Dispatch Console, Part II
 - ARMER Control Stations, if applicable
 - Dispatch Scenario Module
 - Other relevant modules as developed
- State Standard 3.24.0, Public Safety Answering Point (PSAP) Interoperability
- State Standard 2.8.0, Talkgroup and Radio User Priority
- State Standard 2.14.0, Private Call
- State Standard 2.16.0, Emergency Button
- Patching and Multi-Select



- Encryption
 - Shared or Private
 - Selectable
- Paging
- Channel Marker

Section V: Interoperability

- Minnesota Public Safety Mobile VHF Interoperable Frequency Plan
- Regional Tactical Interoperable Communications Plan (TICP)
- Communications Assets Survey and Mapping Tool (CASM)
 - State Standard 3.40.0
- State Standard 3.16.0, 800 MHz Statewide STAC Interoperability Talkgroups
- State Standard 3.16.2, Use of Statewide 800MHz STAC 1-12 Talkgroups - Air Ambulance Emergency Landing Zone Coordination
- State Standard 3.16.3, Cross Spectrum Interoperability System 800 MHz Mutual Aid Resources
- State Standard 3.16.4, Cross Spectrum Interoperability System VLAW31 Resources
- State Standard 3.16.5, Cross Spectrum Interoperability System VHF Variable Frequency Station (VFS) Resources
- State Standard 3.19.0, Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups
- State Standard 3.31.0, ARMER System StatusBoard
- State Standard 3.32.0, Statewide Interoperable Plain Language Policy
- State Standard 3.44.0, Statewide Pursuit Communications
- State Standard 3.35.0, National Weather Service Standard
- Motobridge (Ref Standards 3.16.3, 3.16.4 and 3.16.5)

Section VI: Other Resources

Strategic Technology Reserve

- State Standard 3.33.0, Establishment of Strategic Technology Reserve
- State Standard 3.33.1, STR Radio Cache
 - Accompanying Regional Standard
- State Standard 3.33.2, STR – Transportable Tower/Repeater
 - Accompanying Regional Standard

COML and COMT

- State Standard 3.17.0, Criteria for State Certification as a Communications Unit Leader All Hazards COML
- State Standard 3.17.3, Criteria for State Certification as a Communications Unit Technician COMT



IMT/CRTF/IDT

- Incident Management Team, Communications Response Task Force, Incident Dispatch Team

Section VII: Compliance & Conflict Resolution

- State Standard 7.1.0, Audit/Monitoring Process
- State Standard 7.2.0, Response to Non-Compliance
- State Standard 7.3.0, The Appeal Process

Section VIII: Refresher Training Plan

Section IX: Other Best Practice Guides

Section X: Minnesota Emergency Communication Networks Contacts

Section XI: Regional Radio and Advisory Committee Contacts

Section XII: Radio Affiliated Acronyms



DOCUMENT REVISION HISTORY

Date	Revision	Notes	Name
5-17-2013	Removed Tom Johnson Added NWS standard info	Replaced with Brandon Abley	Cathy Anderson
2-6-2016	Revisions as necessary	Workgroup	Cathy Anderson



Section I: Introduction

The Dispatcher Best Practice Workgroup was created in 2012 to develop a Best Practice Guide for those who serve in the role of dispatcher. Dispatchers provide a vital role in the delivery of public safety services. This guide is designed to serve as both a training plan and a resource document. The Minnesota Dispatchers Communications Best Practice Guide is a living document, and suggested changes may be submitted to the Emergency Communication Networks (ECN) Standards & Training Coordinator.

NOTE: Questions regarding State Standards or clarification of these standards should be directed to your Local System Administrator, your Regional Interoperability Coordinator (RIC), or the Statewide Interoperability Program Manager.

For current email contact information, please see Staff Contacts on the ECN website:

<https://dps.mn.gov/divisions/ecn/Pages/default.aspx>

Section II ARMER Basics for Dispatchers

State Standard 1.11.3, Training Dispatchers

Each agency operating on the ARMER system is responsible for the training of their personnel and compliance with State, Regional, and Local Operating Standards and should customize their training plan to fit their own unique situation.

Dispatch personnel shall successfully complete, at a minimum, training on the console system installed by the user agency, as well as topics listed in State Standard 1.11.3.

Dispatch personnel shall be familiar with all applicable mutual aid and interop requirements of this Standards manual and all established standard operating procedures developed by their agencies.

State Standard 1.11.5, Training Interoperability Participants

Radio operators shall have successfully completed appropriate training and demonstrate knowledge of Section 3, Interoperability Guidelines.

Radio operators with access to interoperability channels shall be familiar with all applicable mutual aid and interoperability requirements in this procedure manual, as well as any established, standard interoperability operating procedures developed by their agency.

See State Standard 1.11.5 for specific requirements, listed under Section 4, Recommended Protocol/Standard.

Suggested supplemental training to the required training listed in State Standards 1.11.3 and 1.11.5:

It is highly recommended that Dispatchers view training modules, created on behalf of the Statewide Emergency Communications Board (SECB) and reviewed and approved by subject matter experts. These



training modules are hosted through the Alexandria Technical & Community College online website. They can be accessed from ECN's website under ARMER Standards.

A user name and password will be needed for these training modules, and instructions for obtaining these are posted on ECN's website under ARMER Standards. While web-based training is supplemental, except for the Minimum Training Requirements, all users must attend formal training for the ARMER system.

Alexandria Technical & Community College Training Modules

- Radio 101
- History of ARMER
- Interoperability 101
- CentraComm Dispatch Console, Part I (until 5/15/2016)
- CentraComm Dispatch Console, Part II (until 5/15/2016)
- MCC7500 Dispatch Console, Part I
- MCC7500 Dispatch Console, Part II
- ARMER Control Stations
- EF Johnson, Parts 1-4, if applicable
- Patching and Multi Select
- Encryption
 - Shared or Private
 - Selectable
- Paging
- Channel Markers
- Motobridge
- StatusBoard 2.0 End User Training
- StatusBoard 2.0 Administrator Training, if applicable
- Other relevant modules as developed

FEMA/NIMS:

FEMA/NIMS: The National Incident Management System (NIMS) provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. Each agency should design ongoing NIMS training, which should complement other training initiatives. NIMS should not be considered a stand-alone training curriculum.

NIMS training courses can be found at:

<http://www.fema.gov/emergency/nims/NIMSTrainingCourses.shtm>



- IS-100.b, Introduction to the Incident Command System (ICS 100) (Required)
- IS-700.a, National Incident Management System (NIMS), An Introduction (Required)
- IS-200.b, ICS for Single Resources and Initial Action Incidents (ICS200) (Required)

Attending Field User ARMER Training: Information about local field user training may be obtained through your local System Administrator or Regional Advisory Committee (RAC).

State Standard 2.8.0, Talkgroup and Radio User Priority

Priority levels in the system will be managed at the talkgroup level. Distributing priorities at the talkgroup level will maximize critical communications capabilities, while minimizing the number of high priority talkgroups. All user priorities will be set to the lowest priority level, which is 10.

As radio users change talkgroups, their effective priority will be set by the talkgroup they are on.

State Standard 2.14.0, Private Call

The private call resource should primarily be used as a supervisory function. If there is a business need for a radio user to have this ability, the owning agency shall request the feature, in writing, to the local System Administrator. Private Call needs to be managed to protect site radio channel resources. This is also a function that dispatch consoles are capable of.

State Standard 2.16.0, Emergency Button

In conjunction with the review of Standard 2.16.0 – Emergency Button, personnel conducting the training, or review, should also review the Agency’s “Emergency Button Response Plan.” This plan is required of all agencies that have chosen to configure the Emergency Button for use. Having such a plan provides end users and dispatchers with the background and knowledge they need to act appropriately when the emergency button is activated. It is recommended that “Emergency Button Response Plan” be reviewed during initial training, as well as at all refresher training sessions.

Language from the standard:

- All agencies implementing the Emergency Button must have a plan in place to respond to Emergency Button activation.
- All Emergency Button response plans must include, at minimum:
 - A central radio monitoring point that can identify which radio user pushed the key, the location and nature of the emergency, and what the proper agency response should be.
 - A central monitoring point must be available during any/all hours that personnel are using the radio system.
 - A policy for use of the Emergency Button by radio users.
 - A response plan to assist the radio user in need.
 - In the event the central radio monitoring point is not the same agency as the radio user, an agreement on policy, monitoring, use, and response, must be in place among the agencies.



*In the event the central radio monitoring point is not the same agency as the radio user, an agreement on policy, monitoring, use, and response must be in place among the agencies

Section IV: ARMER Console Training

Although Public Safety Answering Points may have different types of dispatch consoles, the ultimate goal remains identical – to obtain details from callers and send appropriate help in a timely manner.

This section contains information about several topics, including which online training will be the most beneficial for dispatchers. Training modules will contain specifics about consoles and control stations used on the ARMER system, along with much more information.

It is important to note that these online training modules are intended to be used for refresher, or pre-hands-on, training. The modules are not expected to take the place of classroom training about how to use equipment.

Online training will include information about CentraComm, MCC7500 dispatch consoles, and Motobridge. The training will cover tasks like Patching/Multi-Select, Encryption, and Paging.

Channel markers are not covered in the online training, but they are designed to provide a short beep over radio channels to notify listeners a “special event” is in progress, and radio transmissions should be kept to a minimum. Special events would involve officer and/or public safety. The beep tone is timed and adjustable. Check with your agency for their policy on the use of channel markers.

Call Alert is another function not covered in the online training, but it allows a dispatcher to page a portable or mobile radio. Paging a radio does not tie up a frequency or lock the radio up when it gets paged. Each PSAP shall ensure that their dispatchers are familiar with this capability.

Section V: Interoperability

This section will consist of state standards that are most pertinent to your job as a dispatcher. Take the time to become familiar with each of them. While they are written as standards, it is recommended that your agency determine the best way to incorporate these, as well as additional training, into your agency’s program as a way to enhance the information set forth in the Minnesota Dispatchers Communications Best Practice Guide.

Minnesota Public Safety VHF Interoperability Frequency Plan

The Minnesota VHF Interoperability Frequency plan may be found on the SECB website.

Dispatch personnel should be familiar with the regional communications resources that are available to their jurisdiction, as well as the process they must follow to request them. This information will be provided in the region’s Tactical Interoperable Communications Plan (TICP) and should also be listed in



CASM – the Communications Assets Survey and Mapping Tool. PSAP managers should consider providing TICP information and/or CASM information to dispatch personnel in a readily accessible format.

Tactical Interoperable Communications Plan (TICP)

Tactical Interoperable Communications Plans are used by jurisdictions to document interoperable communications governance structures, technology resources, and usage policies/procedures. The TICP describes what interoperable communications assets are available in an area, how those assets are shared and prioritized, and the steps that individual agencies should use to request, activate, and deactivate them.

Communications Assets Survey and Mapping Tool (CASM)

CASM is a web-based software application that enables communication planners to survey and inventory existing Land Mobile Radio (LMR) communication equipment and infrastructure in a state or urban area. It provides a single repository for information about LMR systems, methods of interoperability, and how they are used by emergency responders. CASM is available nationwide and provides inter-agency interoperability analysis. CASM is an important tool for public safety during an incident or exercise anywhere in the state of Minnesota. See State Standard 3.40.0, CASM/TICP Standard for Data Entry and Maintenance. For more information on CASM, go to <http://www.in.gov/ipsc/2529.htm>

Motobridge Consoles

In an effort to augment interoperability between ARMER talkgroups and VHF resources, the state of Minnesota has implemented a VHF overlay system to ARMER. Motobridge consoles have been built and installed in several PSAPs, including St Louis Co, Ottertail Co, and the Minnesota State Patrol Regional Dispatch Centers. Motobridge consoles have the unique ability to apply soft patches between VHF resources and ARMER talkgroups at specific ARMER comm sites. The specific VHF interoperability resources are defined in the MN VHF Interoperable Frequency Plan, which can be found in Studies and Reports on the ARMER home page. The specific ARMER comm sites that house variable frequency stations (VFS) are listed in appendix A of Standard 3.16.5.

MNFOG

The Minnesota Communications Field Operations Guide (MNFOG) is a collection of technical reference material to aid communications unit personnel in establishing solutions to support communications during emergency incidents and planned events. The MNFOG also contains local, state, and national interoperability channel information.

Printed copies for field use can be obtained by contacting the State Interoperability Program Manager.

Electronic access can be found by going to the ECN website at:

<https://dps.mn.gov/divisions/ecn/programs/armer/Pages/Guide-Books.aspx> or by downloading the OEC/ICTAP Public Safety Tools Library App to your smart phone or tablet. Within the App, you will be able to see the published documents for the state of Minnesota, which contains the MNFOG.



State Standard 3.16.0, 800 MHz Statewide STAC Interoperability Talkgroups

Dispatch personnel should be familiar with these statewide talkgroup resources and understand the circumstances when they would be used.

Important points that should be emphasized for PSAPs:

- Use in order (i.e., 1,2,3,4, etc.) for emergent events
- Use in reverse order (12, 11, 10, 9, etc.) for preplanned and non-emergent events. For PSAPs that do not have all twelve STACs, use in reverse order starting at largest number available to you (i.e. 4, 3, 2, 1)
- Clear speech only - no "10" codes on statewide or regional talkgroups
- Priority of use should be for incidents with responders from multiple regions
- StatusBoard tracking: clear the statewide talkgroup verbally when the incident is over and update the StatusBoard
- It is recommended that dispatchers have reference material available describing where the statewide talkgroups are in responder radios

State Standard 3.16.2, Use of Statewide 800MHz STAC 1-12 Talkgroups - Air Ambulance Emergency Landing Zone Coordination

Dispatch personnel should understand the communications procedure for landing an air ambulance at their incident and be prepared to assist the incident commander with the process.

Dispatchers should understand the different resources necessary for this function, depending on whether or not the air ambulance has ARMER radio capabilities.

Reference material should be developed for each PSAP describing the radio capabilities for air ambulances that commonly respond in their jurisdiction.

State Standard 3.16.3, Cross Spectrum Interoperability System (CSIS) 800 MHz National Mutual Aid Resources

The purpose of this standard is to establish procedures for use and patching of 800 MHz national mutual aid resources included in the ARMER Cross Spectrum Interoperability System for interagency communications.

State Standard 3.16.4, Cross Spectrum Interoperability System VLAW31 Resources

The purpose of this standard is to establish procedures for use and patching of VLAW31 resources included in the ARMER Cross Spectrum Interoperability System for interagency communications.

State Standard 3.16.5, Cross Spectrum Interoperability System VHF Variable Frequency Station (VFS) Resources

The purpose of this standard is to establish procedures for use and patching of VHF Variable Frequency Station (VFS) resources included in the ARMER Cross Spectrum Interoperability System for interagency communications.

The most common VHF channels that are available to law enforcement are:



- VLAW31
- VFIR23
- VMED28
- MNCOMM

Others may be available as well, such as the National Interoperability Channels VCALL10 and VTAC11-14.

Local procedures should be developed that list the specific scenarios in which VHF channels would be needed.

For PSAPs where patching is infrequent, step-by-step procedures in a quick-reference format should be developed so that dispatch staff can perform this function when necessary.

State Standard 3.19.0, Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups

Dispatch centers will not have LE_SIUs.

If a PSAP has LTAC5E through LTAC8E, dispatch staff must not patch them to anything.

The StatusBoard must be used to reserve these resources.

State Standard 3.31.0, ARMER System StatusBoard

This standard will give guidance to all ARMER dispatch centers as to what talkgroups or channels should be on their StatusBoard Application and will serve to minimize usage conflicts when multiple incidents may be occurring simultaneously.

The StatusBoard shall be used for all emergent events or pre-planned exercises. It is available to all PSAPs via internet access. Basic procedures on usage of the StatusBoard should be developed by each agency and made readily accessible to dispatchers and other end-users.

Every dispatcher should be familiar with the contents of this standard and must complete the online training module for StatusBoard prior to getting an individual log on and password.

State Standard 3.32.0, Statewide Interoperable Plain Language Policy

It is recommended that PSAP communications plans be developed, requiring clear speech for day-to-day activities. A limited list of permitted codes should be published for users and be strictly adhered to. This will make it easier to use clear speech only on major events as well.

State Standard 3.44.0, Statewide Pursuit Communications Standard

The purpose of this standard is to establish the guidelines and procedures for pursuit communications. Upon initiating the pursuit on a local talkgroup, the controlling dispatcher will patch the local talkgroup to the first available LTAC and reserve the LTAC via the StatusBoard. Upon placing the patch, the controlling dispatcher will announce the patch and the reason for the patch. If VHF resources are to be involved, VLAW31 will be patched with the local talkgroup and the first available LTAC. If the pursuit is



going to extend past the local PSAP's VLAW31 coverage, the nearest State Patrol Regional Dispatch Center should be contacted to apply the patch outside the local coverage area. Once the pursuit has been completed, the original, controlling dispatcher will announce the removal of the patch, remove the patch, and update the StatusBoard.

State Standard 3.35.0, National Weather Service Standard

The purpose of this standard is to define the ARMER talkgroups and procedures to be used by the National Weather Service (NWS) offices that serve the various ARMER regions of the state for NWS to county and local agency communications during severe weather events.

Section VI: Other Resources

State Standard 3.33.0, Establishment of Strategic Technology Reserve (STR), 3.33.1 STR Radio Cache and 3.33.2 STR- Transportable Tower/Repeater

The basic purpose of a Minnesota STR is to provide communication resources that can be deployed in situations where there is a catastrophic loss of the existing public safety communication capabilities. Each of the seven communications regions in Minnesota has an STR to:

- Provide communication resources that can be deployed in situations where there is a catastrophic loss of existing public safety communication capabilities.
- Provide communication resources that can be used to supplement existing public safety communication resources where an event or natural disaster requires more resources and capability than are currently available locally or regionally.
- Provide a transportable communications resource that can be used to support operations of local public safety officials responding to a serious event or natural disaster to another state.

It is suggested that each PSAP insert or link the applicable Regional STR Standard to this document.

Communications Unit Leader (COML) and Communications Unit Technician (COMT)

During all-hazards emergency response operations, communications among multiple jurisdictions and disciplines, including emergency medical, fire, and law enforcement, is essential. Unfortunately, the absence of on-scene communications coordination has often compromised critical operations. To close this gap, the Department of Homeland Security's (DHS) Office of Emergency Communications (OEC), in partnership with the Office of Interoperability and Compatibility (OIC), the Federal Emergency Management Agency (FEMA), National Integration Center (NIC), and practitioners from across the country, developed performance and training standards for the All Hazards Type III COML & COMT, formulating the curriculum and comprehensive All Hazards Type III COML & COMT courses. See State Standard 3.17.0, Criteria for State Certification as a Communications Unit Leader, State Standard 3.17.2, Statewide COML Talkgroup, and State Standard 3.17.4, Event and Exercise Communications Planning for additional information.

Communications Unit Leader (COML)

COML responsibilities include developing plans for the effective use of incident communications equipment and facilities, managing the distribution of communications equipment to incident



personnel, and coordinating the installation and testing of communications equipment. See State Standard 3.17.0 for more information.

Full-scale/functional exercises or pre-planned events using more than one statewide interoperability talkgroup must utilize the services of a Minnesota certified COML.

Communications Unit Technician (COMT)

The All-Hazards Communications Technician, or COMT, is responsible for practices and procedures common to radio communications technicians during all-hazards emergency operations. COMTs work within the Incident Command System (ICS) organizational structure. See State Standard 3.17.3, Criteria for State Certification as a Communications Technician for more information.

Incident Management Team (IMT)

An Incident Management Team, (IMT), is a multi-agency/multi-jurisdiction team for extended incidents, formed and managed at the State, regional, or metropolitan level. An IMT is deployed as a team of 8-24 trained personnel to manage major and/or complex incidents requiring a significant amount of local, regional, and state resources, as well as incidents that extend into multiple operational periods and require a written Incident Action Plan (IAP).

Communications Response Task Force (CRTF)

The Metro Region CRTF is an ICS trained, all-hazard personnel resource to be used by an agency to assist in the field, the command post, the EOC, or the PSAP. The CRTF can be an expertise or personnel resource and may assist with logistics if the communications or other equipment is necessary. The team will assume radio duties for the incident or event and can be a resource to support troubleshooting and managing equipment or documentation and resource deployment.

Incident Dispatch Team (IDT)

The IDT is comprised of dispatch professionals from around the Metro Region. The team represents multi-discipline PSAP personnel (police fire, EMS) ready to deploy and bring the unique skills of the dispatcher to augment incident management at an incident or event. The IDT also serves as Minnesota's Telecommunications Emergency Response Taskforce (MN-TERT) under the National Joint TERT Initiative and is recognized nationally.

The Metropolitan Emergency Services Board (MESB) supports the CRTF and IDT/MN-TERT. The CRTF or MN-TERT can be requested for assistance at an emergency event by contacting the Minnesota State Duty Officer.

Section VII: Compliance and Conflict Resolution

The suggested method for reporting conflicts noticed by dispatchers is to attempt a resolution through direct contact with the PSAP or dispatcher involved. If direct contact with the PSAP or dispatcher is not an option, the issue should be documented and forwarded to your supervisor. The supervisor or PSAP manager should attempt to obtain a resolution with the other PSAP. However, if a conflict is not able to be resolved at this level, the issue should be brought to the regional user/owner and operator committee level. For more information, see State Standards 7.1.0, 7.2.0, and 7.3.0.



Section VIII: Refresher Training Plan

While it is the responsibility of each agency to establish their own dispatch refresher training at least every two years, it is imperative to keep personnel up-to-date on the latest technological innovations, as well as applicable local, regional, and state guidelines/mandates.

It is a best practice recommendation that ARMER online equipment and console training modules be reviewed annually, at a minimum. In addition, the Minnesota Dispatchers Communications Best Practice Guide should become part of every agency's new trainee curriculum, and it should also be reviewed periodically in training sessions for current employees.

Online training modules are available to all users. These courses, created on behalf of the Statewide Emergency Communications Board (SECB) and reviewed and approved by subject matter experts, are hosted through the Alexandria Technical & Community College online website. They can be accessed from ECN's website under ARMER Standards.

A user name and password will be needed for these training modules, and instructions for obtaining these are posted on ECN's website under ARMER standards.

Section IX: Other Best Practice Guides

Fire
Emergency Management/Public Health
Dispatch
Public Works
EMS/Hospitals

These guides have been created as a result of diligent work by the groups involved. These guides provide direction for their respective public safety disciplines and are available online. Access to completed Best Practice Guides is available at: <https://dps.mn.gov/entity/SRB>

Section X: Minnesota Emergency Communication Networks Contacts

For current email contact information, please see Staff Contacts on the ECN website:
<https://dps.mn.gov/divisions/ecn/Pages/default.aspx>

Section XI: Regional Emergency Communications Boards/Emergency Services Boards and Advisory Committee Contacts

Contacts for the Regional Emergency Communications Boards/Emergency Services Boards (ECB/ESB) and Regional Advisory Committees (RAC) can be found on the ECN website under:
<https://dps.mn.gov/entity/srb/regions/pages/default.aspx>

Section XII: Radio Affiliated Acronyms

Link to commonly used radio affiliated acronyms – <https://dps.mn.gov/entity/SRB> , click on ARMER and then click on Acronyms.



Minnesota Dispatchers

Communications Best Practice Guide

Statewide Radio Board, Operations & Technical Committee, Interoperability
Committee, Dispatch Best Practice Workgroup

Approved by the Statewide Radio Board

(DATE)

~~November 29, 2012~~

This document describes the recommended best practice, standards, and contact information for Minnesota dispatchers to assist in planning for interoperability with other public safety disciplines.



Table of Contents

Section I: Introduction

- Dispatchers Best Practice Workgroup

Section II: Participation in ARMER

- State Standard 1.10.0, Requesting and Configuring Participation
- Agency's Participation Plan

Section III: ARMER Basics for Dispatchers

- State Standard 1.11.3, Training Dispatchers
- Alexandria Technical & Community College Training Modules
 - Radio 101
 - History of ARMER
 - Interoperability 101
 - Interoperability: How to Communicate Outside Your Agency
 - Computer Basics for Dispatchers
 - Dispatcher Technology Part I
 - Dispatcher Technology Part II
- FEMA NIMS Courses (in this order)
 - ~~IS-100.LEb, Introduction to the Incident Command System (ICS 100) for Law Enforcement (Required)~~
 - IS-100.b, Introduction to the Incident Command System (ICS-100) (Required)
 - IS-700.a, National Incident Management System (NIMS), An Introduction (Required)
 - IS-200.b, ICS for Single Resources and Initial Action Incidents (ICS 200) (Required)
 - IS-800.B, National Response Framework, An Introduction (ICS 800) (Recommended)
 - ~~IS-704, NIMS Communications and Information Management~~
 - ~~IS-800.B, National Response Framework, An Introduction [AC1]~~
- Attending Field User ARMER Training

Section IV: ARMER Console Operation

- Alexandria Technical & Community College Training Modules
 - CentraComm Dispatch Console, Part I (until 5/15/2016)
 - CentraComm Dispatch Console, Part II (until 5/15/2016)



- MCC7500 Dispatch Console, Part I
- MCC7500 Dispatch Console, Part II
- ARMER Control Stations, if applicable
- Dispatch Scenario Module
- Other relevant modules as developed
- State Standard 3.24.0, Public Safety Answering Point (PSAP) Interoperability
- State Standard 2.8.0, Talkgroup and Radio User Priority
- State Standard 2.14.0, Private Call
- State Standard 2.16.0, Emergency Button
- Patching and Multi-Select

- Encryption
 - Shared or Private
 - Selectable
- Paging
- Channel Marker

Section V: Interoperability

- Minnesota Public Safety Mobile VHF Interoperable Frequency Plan
- Regional Tactical Interoperable Communications Plan (TICP)
- Communications Assets Survey and Mapping Tool (CASM)
 - State Standard 3.40.0
- State Standard 3.5.0, National/Statewide VHF Interoperability Resources (VLAW31, VMED28, VFIR23, MIMS)
- State Standard 3.16.0, 800 MHz Statewide STAC Interoperability Talkgroups Incident Response Talkgroups: STACs, ETACs, FTACs, and LTACs [AC2]
- State Standard 3.16.2, Use of Statewide 800MHz STAC 1-124 Talkgroups - Air Ambulance Emergency Landing Zone Coordination
- State Standard 3.16.3, Cross Spectrum Interoperability System 800 MHz Mutual Aid Resources
- State Standard 3.16.4, Cross Spectrum Interoperability System VLAW31 Resources
- State Standard 3.16.5, Cross Spectrum Interoperability System VHF Variable Frequency Station (VFS) Resources
- State Standard 3.19.0, Use of Statewide 800 MHz Statewide LTAC and SIU Interoperability Talkgroups Common Pool Talkgroups — LE_TACs & LESIU_TACs [AC3]
- State Standard 3.31.0, ARMER System Status Board [AC4]
- State Standard 3.32.0, Statewide Interoperable Plain Language Policy
- State Standard 3.44.0, Statewide Pursuit Communications



- [State Standard 3.35.0](#), National Weather Service Standard
- [Motobridge \(Ref Standards 3.16.3, 3.16.4 and 3.16.5\)](#)

Section VI: Other Resources

Strategic Technology Reserve

- State Standard 3.33.0, Establishment of Strategic Technology Reserve
- State Standard 3.33.1, STR Radio Cache
 - Accompanying Regional Standard
- State Standard 3.33.2, STR – Transportable Tower/Repeater
 - Accompanying Regional Standard

Section VII: COML and COMT

- [State Standard 3.17.0, Criteria for State Certification as a Communications Unit Leader All Hazards COML](#)
- [State Standard 3.17.3, Criteria for State Certification as a Communications Unit Technician COMT \[ACS\]](#)

IMT/CRTF/IDT

- [Incident Management Team, Communications Response Task Force, Incident Dispatch Team](#)
- ~~State Standard 3.17.2, Statewide COML Talkgroup~~

Section VIII: Compliance & Conflict Resolution

- State Standard 7.1.0, Audit/Monitoring Process
- State Standard 7.2.0, Response to Non-Compliance
- State Standard 7.3.0, The Appeal Process

Section ~~VIII~~IX: Refresher Training Plan

Section IX: Other Best Practice Guides

Section XI: Minnesota Emergency Communication Networks Contacts

Section XII: Regional Radio and Advisory Committee Contacts

~~Section XIII: Dispatchers Best Practice Workgroup~~

Section XII~~V~~IV: Radio Affiliated Acronyms



DOCUMENT REVISION HISTORY

Date	Revision	Notes	Name
5-17-2013	Removed Tom Johnson Added NWS standard info	Replaced with Brandon Abley	Cathy Anderson



Section I: Introduction

The Dispatcher Best Practice Workgroup was created in 2012 to develop a Best Practice Guide for those who serve in the role of dispatcher. Dispatchers provide a vital role in the delivery of public safety services. This guide is designed to serve as both a training plan and a resource document. The Minnesota Dispatchers Communications Best Practice Guide is a living document, and suggested changes may be submitted to the [Emergency Communication Networks \(ECN\) Standards & Training Coordinator](#).

~~Statewide Interoperability Committee for consideration through the Statewide Interoperability Program Manager, Brandon.Abley@state.mn.us, or by calling 651-201-7554.~~

NOTE: Questions regarding State Standards or clarification of these standards should be directed to your [Local County](#) System Administrator, [your Regional Interoperability Coordinator \(RIC\)](#), or the Statewide Interoperability Program Manager.



-For current email contact information, please see Staff Contacts on the ECN website:
<https://dps.mn.gov/divisions/ecn/Pages/default.aspx>

Section II: Participation in ARMER

Should jurisdictions choose to participate, State Standard 1.10.0, Requesting and Configuring Participation, details the necessary requirements. State Standards may be found on the Statewide Radio Board (SRB) website at <https://dps.mn.gov/divisions/ecn/Pages/default.aspx>.

The workgroup recommends that each agency either link to or attach their limited or full ARMER Participation Plan to this document.

It is the workgroup's best practice recommendation that all Minnesota Public Safety Answering Points (PSAPs) migrate to the Minnesota 800 MHz ARMER system. The highest and most effective level of interoperability is achieved when users share the same radio system and have shared talkgroups directly accessible to them in their radios. [AC6]

Copies of County Participation Plans may be obtained from the Director or Supervisor of the County Dispatch Center, PSAP, or from the Regional Advisory Committee (RAC).

Section III II. ARMER Basics for Dispatchers

State Standard 1.11.3, Training Dispatchers

Dispatch personnel shall have successfully completed appropriate training on the console system installed by the user agency. Appropriate training shall, at a minimum, include formal training either by a qualified factory instructor familiar with the agency's operations or by a dispatch trainer who completed the training from a qualified instructor.

Each agency operating on the ARMER system is responsible for the training of their personnel and compliance with State, Regional, and Local Operating Standards and should customize their training plan to fit their own unique situation.

Dispatch personnel shall successfully complete, at a minimum, training on the console system installed by the user agency, as well as topics listed in State Standard 1.11.3.

Dispatch personnel shall be familiar with all applicable mutual aid and interop requirements of this S standards manual and all established standard operating procedures developed by their agencies.

Each agency should customize their training plan to fit their own unique situation. It is recommended that all training be completed by a qualified ARMER trainer. [AC7]

State Standard 1.11.5, Training Interoperability Participants



Radio operators shall have successfully completed appropriate training and demonstrate knowledge of Section 3, Interoperability Guidelines.

Radio operators with access to interoperability channels shall be familiar with all applicable mutual aid and interoperability requirements in this procedure manual, as well as any established, standard interoperability operating procedures developed by their agency.

See State Standard 1.11.5 for specific requirements, listed under Section 4, Recommended Protocol/Standard.

Suggested supplemental training to the required training listed in State Standards 1.11.3 and 1.11.54:

It is highly recommended that Dispatchers view training modules, created on behalf of the Statewide Emergency Communications Board (SECB) and reviewed and approved by subject matter experts. These training modules are hosted through the Alexandria Technical & Community College online website. They can be accessed from ECN's website under ARMER Standards.

A user name and password will be needed for these training modules, and instructions for obtaining these are posted on ECN's website under ARMER Standards. While web-based training is supplemental, except for the Minimum Training Requirements, all users must attend formal training for the ARMER system. Alexandria Technical & Community College online training modules may be obtained through their website, <http://www.alextech.edu/static/d21.html?logout=1>, or by contacting the Statewide Interoperability Program Manager at Brandon.Abley@state.mn.us. To obtain user name and password

information for the Alexandria Technical & Community College online training, please contact Linda Muchow at 320-762-4539, 1-888-234-1313, or via email at lindac@alextech.edu.

Alexandria Technical & Community College Training Modules

- Radio 101
- History of ARMER
- Interoperability 101
- CentraComm Dispatch Console, Part I (until 5/15/2016)
- CentraComm Dispatch Console, Part II (until 5/15/2016)
- MCC7500 Dispatch Console, Part I
- MCC7500 Dispatch Console, Part II
- ARMER Control Stations
- EF Johnson, Parts 1-4, if applicable
- Patching and Multi Select
- Encryption
 - Shared or Private



- Selectable
- Paging
- Channel Markers
- Motobridge Channel Marker^[AC9]
- StatusBoard 2.0 End User Training
- StatusBoard 2.0 Administrator Training, if applicable
- Other relevant modules as developed^[AC10]

FEMA/NIMS:

FEMA/NIMS: The National Incident Management System (NIMS) provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. Each agency should design ongoing NIMS training, which should complement other training initiatives. NIMS should not be considered a stand-alone training curriculum.

NIMS training courses can be found at:

<http://www.fema.gov/emergency/nims/NIMSTrainingCourses.shtm>

- IS-100.b, Introduction to the Incident Command System (ICS 100) (Required)
- IS-700.a, National Incident Management System (NIMS), An Introduction (Required)
- IS-200.b, ICS for Single Resources and Initial Action Incidents (ICS200) (Required)

Attending Field User ARMER Training: Information about local field user training may be obtained through your local System Administrator or Regional Advisory Committee (RAC).^[AC11]

State Standard 3.24.0, Public Safety Answering Point (PSAP) Interoperability

The statewide implementation of the ARMER backbone provides the opportunity to establish a uniform approach to using the ARMER system for communicating with PSAPs across the state. For counties that are full participants on the ARMER system, PSAPs generally have access to multiple talkgroups, including statewide and regional interoperability talkgroups.

Two ARMER radio control stations were provided to all non-metro PSAPs through the Public Safety Interoperable Communication (PSIC) grant program, establishing a uniform capability to communicate with participating and non-participating PSAPs.^[AC12]

State Standard 2.8.0, Talkgroup and Radio User Priority

Priority levels in the system will be managed at the talkgroup level. Distributing priorities at the talkgroup level will maximize critical communications capabilities, while minimizing the number of high priority talkgroups. All user priorities will be set to the lowest priority level, which is 10.



As radio users change talkgroups, their effective priority will be set by the talkgroup they are on. [AC13]

State Standard 2.14.0, Private Call

The private call resource should primarily be used as a supervisory function. If there is a business need for a radio user to have this ability, the owning agency shall request the feature, in writing, to the local System Administrator. Private Call needs to be managed to protect site radio channel resources. This is also a function that dispatch consoles are capable of. [AC14]

State Standard 2.16.0, Emergency Button

In conjunction with the review of Standard 2.16.0 – Emergency Button, personnel conducting the training, or review, should also review the Agency’s “Emergency Button Response Plan.” This plan is required of all agencies that have chosen to configure the Emergency Button for use. Having such a plan provides end users and dispatchers with the background and knowledge they need to act appropriately when the emergency button is activated. It is recommended that “Emergency Button Response Plan” be reviewed during initial training, as well as at all refresher training sessions.

Language from the standard:

- All agencies implementing the Emergency Button must have a plan in place to respond to Emergency Button activation.
- All Emergency Button response plans must include, at minimum:
 - A central radio monitoring point that can identify which radio user pushed the key, the location and nature of the emergency, and what the proper agency response should be.
 - A central monitoring point must be available during any/all hours that personnel are using the radio system.
 - A policy for use of the Emergency Button by radio users.
 - A response plan to assist the radio user in need.
 - In the event the central radio monitoring point is not the same agency as the radio user, an agreement on policy, monitoring, use, and response, must be in place among the agencies.

Use of the emergency button as an emergency signaling option should be available to any agency on the radio system, subject to certain conditions and provisions.

- Agencies are not required to use this capability of the radio system. [AC15]
- No agency will be permitted to enable their emergency signal on a talkgroup that is designated “Emergency Button Restricted.”
- All agencies implementing the emergency button must have a plan in place to respond to emergency button activation.
- All emergency button response plans must include, at a minimum:

- A central radio monitoring [AC16] point that can identify which radio user pushed the emergency button, the location and nature of the emergency, and what the proper agency response should be.*
- A central monitoring point that is available during any/all hours that personnel are using the radio system
- A policy for use of the emergency button by radio users
- A response plan to assist the radio user in need

*In the event the central radio monitoring point is not the same agency as the radio user, an agreement on policy, monitoring, use, and response must be in place among the agencies [AC17]

FEMA/NIMS: The National Incident Management System (NIMS) provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. Each agency should design ongoing NIMS training, which should complement other training initiatives. NIMS should not be considered a stand-alone training curriculum.

NIMS training courses can be found at:

<http://www.fema.gov/emergency/nims/NIMSTrainingCourses.shtm>

- IS 100.LEb, Introduction to the Incident Command System (ICS 100) for Law Enforcement (Required)
- IS 100.b, Introduction to the Incident Command System (ICS 100) (Required)
- IS 700.a, National Incident Management System (NIMS), An Introduction (Required)
- IS 704, NIMS Communications and Information Management
- IS 800.B, National Response Framework, an Introduction

Attending Field User ARMER Training: Information about local field user training may be obtained through your local System Administrator or Regional Advisory Committee (RAC).

Section IV: ARMER Console Training

Although Public Safety Answering Points may have different types of dispatch consoles, the ultimate goal remains identical – to obtain details from callers and send appropriate help in a timely manner.

This section contains information about several topics, including which online training will be the most beneficial for dispatchers. Training modules will contain specifics about consoles and control stations used on the ARMER system, along with much more information.



It is important to note that these online training modules are intended to be used for refresher, or pre-hands-on, training. The modules are not expected to take the place of classroom training about how to use equipment.

Online training will include information about CentraComm, MCC7500 dispatch consoles, ~~and Motobridge and Motobridge~~. The training will cover tasks like Patching/Multi-Select, Encryption, and Paging.

~~Channel markers are not covered in the online training, but they are designed to provide a short beep over radio channels to notify listeners a “special event” is in progress, and radio transmissions should be kept to a minimum. Special events would involve officer and/or public safety. The beep tone is timed and adjustable. Check with your agency for their policy on the use of channel markers.~~^[AC18]

~~Call Alert is another function not covered in the online training, but it allows a dispatcher to page a portable or mobile radio. Paging a radio does not tie up a frequency or lock the radio up when it gets paged. Each PSAP shall ensure that their dispatchers are familiar with this capability.~~

~~This section will also consist of state standards that are most pertinent to your job as a dispatcher. Take the time to become familiar with each of them. While they are written as standards, it is recommended that your agency determine the best way to incorporate these, as well as additional training, into your agency’s program as a way to enhance the information set forth in the Minnesota Dispatchers Communications Best Practice Guide.~~

Section V: Interoperability

~~This section will consist of state standards that are most pertinent to your job as a dispatcher. Take the time to become familiar with each of them. While they are written as standards, it is recommended that your agency determine the best way to incorporate these, as well as additional training, into your agency’s program as a way to enhance the information set forth in the Minnesota Dispatchers Communications Best Practice Guide.~~

^[AC19]

Minnesota Public Safety VHF Interoperability Frequency Plan

The Minnesota VHF Interoperability Frequency plan may be found on the ~~SECB SRB~~ website, ~~at~~ <https://dps.mn.gov/entity/SRB>.

~~Excerpt from the SRB MN VHF Interoperable Frequency Plan – Original Date 12-2-2010~~

~~The Statewide VHF Interoperable Frequency Steering Committee established the final revision of the VHF plan on 12-2-2010. This plan describes the primary channel for interagency law enforcement communications in the state as 155.4750 MHz, commonly referred to as MINSEF. The national naming~~



convention for this channel is VLAW 31. Use of this channel is widespread in Minnesota, and permission from the SRB and previous authorities to utilize VLAW 31 outside law enforcement disciplines has been limited. The current standard operational mode for this channel is wideband analog, but this channel is subject to the FCC mandated narrowbanding deadline.

Dispatch personnel in ARMER PSAPs must be familiar with the very high frequency (VHF) channels that are integrated with their local console equipment and are available to be patched to local, regional, or statewide talkgroups. This is necessary when radio interoperability must be established with responders on Legacy VHF systems.

CH #	Channel Name	Short Name ¹	Mobile-TX	Mobile-RX	TX/RX Mobile CTCSS ²	TX/RX-Base CTCSS ³
1	VCALL10	VCAL10	155.7525	155.7525	156.7/CSQ	156.7/156.7
2	VTAC11	VTAC11	151.1375	151.1375	156.7/CSQ	156.7/156.7
3	VTAC12	VTAC12	154.4525	154.4525	156.7/CSQ	156.7/156.7
4	VTAC13	VTAC13	158.7375	158.7375	156.7/CSQ	156.7/156.7
5	VTAC14	VTAC14	159.4725	159.4725	156.7/CSQ	156.7/156.7
6	MNCOMM	MNCOMM	155.3700	155.3700	156.7/156.7	156.7/156.7
7	VFIRE23	VFIR23	154.2950	154.2950	156.7/156.7	156.7/156.7
8	MNFIRG2	MNFG2	154.0100	154.0100	156.7/156.7	156.7/156.7
9	MNFIRG3	MNFG3	153.8300	153.8300	156.7/156.7	156.7/156.7
10	DNRTAC1	DNRT1	151.4750	151.4750	156.7/156.7	N/A ⁴
11	VLAW31	VLAW31	155.4750	155.4750	156.7/156.7	156.7/156.7
12	VMED28	VMED28	155.3400	155.3400	156.7/156.7	156.7/156.7
13	IR-2	IR-2	165.9625	170.4125	167.9/167.9	167.9/167.9
14	VTAC14R	TAC14R	154.6875	159.4725	156.7/156.7	156.7/156.7
15	NGRPTR*	NGRPTR	Rest.	Rest.	Rest.	Rest.
16	LE-2*	LE-2	162.2625	167.2500	\$68F/\$68F	\$68F/\$68F

Regional Tactical Interoperable Communications Plan (TICP)

Tactical Interoperable Communications Plans are used by jurisdictions to document interoperable communications governance structures, technology resources, and usage policies/procedures. The TICP describes what interoperable communications assets are available in an area, how those assets are

¹For use with limited character display radios

* Local option channel if not implemented with LOA or MOU for use of federal channels.

² CTCSS or NAC for subscriber radios. For VCALL10, VTAC11, VTAC12, VTAC13, and VTAC14, use receive CTCSS of 156.7 if needed to mitigate interference.

³ CTCSS or NAC for fixed stations.

⁴ There are no permanent, fixed stations on DNRTAC1.



~~shared and prioritized, and the steps that individual agencies should use to request, activate, and deactivate them.~~

Dispatch personnel should be familiar with the regional communications resources that are available to their jurisdiction, as well as the process they must follow to request them. This information will be provided in the region's Tactical Interoperable Communications Plan (TICP) and should also be listed in CASM – the Communications Assets Survey and Mapping Tool. PSAP managers should consider providing ~~this TICP information and/or CASM TICP~~ information to dispatch personnel in a readily accessible format.

Tactical Interoperable Communications Plan (TICP)

Tactical Interoperable Communications Plans are used by jurisdictions to document interoperable communications governance structures, technology resources, and usage policies/procedures. The TICP describes what interoperable communications assets are available in an area, how those assets are shared and prioritized, and the steps that individual agencies should use to request, activate, and deactivate them.

Communications Assets Survey and Mapping Tool (CASM)

CASM is a web-based software application that enables communication planners to survey and inventory existing Land Mobile Radio (LMR) communication equipment and infrastructure in a state or urban area. It provides a single repository for information about LMR systems, methods of interoperability, and how they are used by emergency responders. CASM is available nationwide and provides inter-agency interoperability analysis. CASM is an important tool for public safety during an incident or exercise anywhere in the state of Minnesota. See State Standard 3.40.0, CASM/TICP Standard for Data Entry and Maintenance. For more information on CASM, go to <http://www.in.gov/ipsc/2529.htm>

Motobridge Consoles

In an effort to augment interoperability between ARMER talkgroups and VHF resources, the state of Minnesota has implemented a VHF overlay system to ARMER. Motobridge consoles have been built and installed in several PSAPs, including St Louis Co, Ottertail Co, and the Minnesota State Patrol Regional Dispatch Centers. Motobridge consoles have the unique ability to apply soft patches between VHF resources and ARMER talkgroups at specific ARMER comm sites. The specific VHF interoperability resources are defined in the MN VHF Interoperable Frequency Plan, which can be found in Studies and Reports on the ARMER home page. The specific ARMER comm sites that house variable frequency stations (VFS) are listed in appendix A of Standard 3.16.5.

MNFOG

The Minnesota Communications Field Operations Guide (MNFOG) is a collection of technical reference material to aid communications unit personnel in establishing solutions to support communications during emergency incidents and planned events. The MNFOG also contains local, state, and national interoperability channel information.

Printed copies for field use can be obtained by contacting the State Interoperability Program Manager.



Electronic access can be found by going to the ECN website at: <https://dps.mn.gov/divisions/ecn/programs/armer/Pages/Guide-Books.aspx> or by downloading the OEC/ICTAP Public Safety Tools Library App to your smart phone or tablet. Within the App, you will be able to see the published documents for the state of Minnesota, which contains the MNFOG.

[AC20]

~~State Standard 3.5.0, National/Statewide VHF Interoperability Resources (MINSEF/VLAW31, EMS HEAR/VMED28, Statewide Fire/VFIR23, MIMS/MNCOMM)~~

The most common VHF channels that are available to law enforcement are:

- ~~VLAW31 (previously MINSEF)~~
- ~~VFIR23 (previously Statewide Fire Mutual Aid)~~
- ~~VMED28 (previously Statewide EMS)~~
- ~~MNCOMM (previously Minnesota Incident Management System – MIMS, or Point-to-Point)~~

~~Others may be available as well, such as the National Interoperability Channels VCALL10 and VTAC11-14.~~

~~Local procedures should be developed that list the specific scenarios in which VHF channels would be needed.~~

~~For PSAPs where patching is infrequent, step-by-step procedures in a quick-reference format should be developed so that dispatch staff can perform this function when necessary.~~

State Standard 3.16.0, 800 MHz Statewide STAC Interoperability Talkgroups Incident Response **Talkgroups: STACs, ETACs, FTACs, & LTACs**

Dispatch personnel should be familiar with these statewide talkgroup resources and understand the circumstances when they would be used.

Important points that should be emphasized for PSAPs:

- Use in order (i.e., 1,2,3,4, etc.) for emergent events
- Use in reverse order (12, 11, 10, 9, etc.) 4, 3, 2, 1 for preplanned and non-emergent events. For PSAPs that do not have all twelve STACs, use in reverse order starting at largest number available to you (i.e. 4, 3, 2, 1)
- Clear speech only - no "10" codes on statewide or regional talkgroups
- Priority of use should be for incidents with responders from multiple regions



- ~~StatusBoard tracking: clear the statewide talkgroup verbally when the incident is over and update the StatusBoard, either locally or through agreement with another agency if the PSAP does not have direct access to a StatusBoard.~~ (AC21)
- ~~It is r~~Recommendation that dispatchers have reference material available describing where the statewide talkgroups are in responder radios

~~Clear the statewide talkgroup verbally when the incident is over and update the StatusBoard~~

State Standard 3.16.2, Use of Statewide 800MHz STAC 1-12 4 Talkgroups - Air Ambulance Emergency Landing Zone Coordination

Dispatch personnel should understand the communications procedure for landing an air ambulance at their incident and be prepared to assist the incident commander with the process.

Dispatchers should understand the different resources necessary for this function, depending on whether or not the air ambulance has ARMER radio capabilities.

Reference material should be developed for each PSAP describing the radio capabilities for air ambulances that commonly respond in their jurisdiction.

State Standard 3.16.3, Cross Spectrum Interoperability System (CSIS) 800 MHz National Mutual Aid Resources

The purpose of this standard is to establish procedures for use and patching of 800 MHz national mutual aid resources included in the ARMER Cross Spectrum Interoperability System for interagency communications.

State Standard 3.16.4, Cross Spectrum Interoperability System VLAW31 Resources

The purpose of this standard is to establish procedures for use and patching of VLAW31 resources included in the ARMER Cross Spectrum Interoperability System for interagency communications.

State Standard 3.16.5, Cross Spectrum Interoperability System VHF Variable Frequency Station (VFS) Resources

The purpose of this standard is to establish procedures for use and patching of VHF Variable Frequency Station (VFS) resources included in the ARMER Cross Spectrum Interoperability System for interagency communications.

The most common VHF channels that are available to law enforcement are:

- VLAW31
- VFIR23
- VMED28
- MNCOMM



Others may be available as well, such as the National Interoperability Channels VCALL10 and VTAC11-14.

Local procedures should be developed that list the specific scenarios in which VHF channels would be needed.

For PSAPs where patching is infrequent, step-by-step procedures in a quick-reference format should be developed so that dispatch staff can perform this function when necessary.

State Standard 3.19.0, Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups Statewide 800 MHz Common Pool Talk Groups LE_TACs & LESIU_TACs

Dispatch centers will not have LE_SIUs.

If a PSAP has LTAC5E through LTAC8E, LE_TACs, dispatch staff must not patch them to anything.

The StatusBoard must be used to reserve these resources, track usage, even for resources the PSAP does not have. PSAPs without access to the StatusBoard should have a cooperative agreement with another center that is equipped with the StatusBoard for making updates.

State Standard 3.31.0, ARMER System StatusBoard

This standard will give guidance to all ARMER dispatch centers as to what talkgroups or channels should be on their StatusBoard Application and will serve to minimize usage conflicts when multiple incidents may be occurring simultaneously.

~~Basic procedures on usage of the StatusBoard should be developed and made readily accessible to dispatchers.~~

~~If a PSAP is not directly connected to ARMER and does not have direct access to the StatusBoard, a cooperative agreement with another center should be in place to allow for StatusBoard updates.~~

The StatusBoard shall be used for all emergent events or pre-planned exercises. It is available to all PSAPs via internet access. Basic procedures on usage of the StatusBoard should be developed by each agency and made readily accessible to dispatchers and other end-users.

~~A method to input details regarding what a resource is being used for should be provided. This can be done with a directly accessible keyboard or a software keyboard on the workstation.~~

Every dispatcher should be familiar with the contents of this standard and must complete the online training module for StatusBoard prior to getting an individual log on and password.

State Standard 3.32.0, Statewide Interoperable Plain Language Policy



It is recommended that PSAP communications plans be developed, requiring clear speech for day-to-day activities. A limited list of permitted codes should be published for users and be strictly adhered to. This will make it easier to use clear speech only on major events as well.

State Standard 3.44.0, Statewide Pursuit Communications Standard

The purpose of this standard is to establish the guidelines and procedures for pursuit communications. Upon initiating the pursuit on a local talkgroup, the controlling dispatcher will patch the local talkgroup to the first available LTAC and reserve the LTAC via the StatusBoard. Upon placing the patch, the controlling dispatcher will announce the patch and the reason for the patch. If VHF resources are to be involved, VLAW31 will be patched with the local talkgroup and the first available LTAC. If the pursuit is going to extend past the local PSAP's VLAW31 coverage, the nearest [State Patrol Regional Dispatch Center Minnesota State Patrol \(MSP\) PSAP](#) should be contacted to apply the patch outside the local coverage area. Once the pursuit has been completed, the original, controlling dispatcher will announce the removal of the patch, remove the patch, and update the StatusBoard.

State Standard 3.35.0, National Weather Service Standard

The purpose of this standard is to define the ARMER talkgroups and procedures to be used by the National Weather Service (NWS) offices that serve the various ARMER regions of the state for NWS to county and local agency communications during severe weather events.

Motobridge Consoles

~~In an effort to augment interoperability between ARMER talk groups and VHF resources, the state of Minnesota has implemented a VHF overlay system to ARMER. Motobridge consoles have been built and installed in several PSAPs including St Louis Co, Ottertail Co, Minnesota State Patrol, . The Motobridge consoles have the unique ability to apply soft patches between VHF resources and ARMER talk groups at specific ARMER comm sites. The specific VHF interoperability resources are defined in the MN VHF Interoperable Frequency Plan which can be found in Studies and Reports on the ARMER home page and the specific ARMER comm sites that house variable frequency stations (VFS) are listed in appendix A of Standard 3.16.5.~~

Section VI: Other Resources

State Standard 3.33.0, Establishment of Strategic Technology Reserve (STR), 3.33.1 STR Radio Cache and 3.33.2 STR- Transportable Tower/Repeater

~~The purpose of these standards are to establish an organizational structure for the coordination of and access to public safety communication resources incorporated into Minnesota's Strategic Technology Reserve (STR). The concept of an STR was established as a requirement to the Public Safety~~



~~Interoperable Communication (PSIC) grant program in 2007, where federal grant funds were specifically earmarked for the establishment of an STR capability in each state.~~ The basic purpose of a the Minnesota STR, as articulated in the PSIC grant, was is to provide communication resources that can be deployed in situations where there is a catastrophic loss of the existing public safety communication capabilities. Each of the seven communications regions in Minnesota has an STR to: In establishing this STR capability, the Statewide Radio Board seeks to coordinate new and existing resources to address the following requirements:

- Provide communication resources that can be deployed in situations where there is a catastrophic loss of existing public safety communication capabilities.
- Provide communication resources that can be used to supplement existing public safety communication resources where an event or natural disaster requires more resources and capability than are currently available locally or regionally.
- Provide a transportable communications resource that can be used to support operations of local public safety officials responding to a serious event or natural disaster to another state.

~~To accomplish these purposes and objectives, this standard seeks to identify communication resources (existing and new) that will be considered part of Minnesota's STR capability and articulate procedures for the maintenance and deployment of those resources.~~

~~It is suggested~~The workgroup suggests that each PSAP dispatch center insert or link the applicable Regional STR Standard to this document.

~~Section VII: Communications Unit Leader (COML) and, Communications Unit Technician (COMT), and Incident Management Team (IMT)~~

During all-hazards emergency response operations, communications among multiple jurisdictions and disciplines, including emergency medical, fire, and law enforcement, is essential. Unfortunately, the absence of on-scene communications coordination has often compromised critical operations. To close this gap, the Department of Homeland Security's (DHS) Office of Emergency Communications (OEC), in partnership with the Office of Interoperability and Compatibility (OIC), the Federal Emergency Management Agency (FEMA), National Integration Center (NIC), and practitioners from across the country, developed performance and training standards for the All Hazards Type III COML & COMT, formulating the curriculum and comprehensive All Hazards Type III COML & COMT courses. See State Standard 3.17.0, Criteria for State Certification as a Communications Unit Leader, ~~and~~ State Standard 3.17.2, Statewide COML Talkgroup, and State Standard 3.17.4, Event and Exercise Communications Planning for additional information.

Communications Unit Leader (COML)

COML responsibilities include developing plans for the effective use of incident communications equipment and facilities, managing the distribution of communications equipment to incident personnel, and coordinating the installation and testing of communications equipment. See State Standard 3.17.01 for more information.



Full-scale/functional exercises or pre-planned events using more than one statewide interoperability talkgroup must utilize the services of a Minnesota certified COML.

Communications Unit Technician (COMT)

The All-Hazards Communications Technician, or COMT, is responsible for practices and procedures common to radio communications technicians during all-hazards emergency operations. COMTs work within the Incident Command System (ICS) organizational structure. See State Standard 3.17.3, Criteria for State Certification as a Communications Technician for more information.

COMTs may be federal, state, local, tribal emergency response professionals, and/or coordination/support personnel with communications backgrounds. COMTs have a technical aptitude and are responsible for managing a Strategic Technology Reserve (radio cache, mobile communications vehicle, or other deployable communications assets).

The major responsibilities of the COMT are:

- Support COMLs in the design of the communications plan.
- Stand up equipment in support of the communications plan.
- Assign and track radio caches.
- Document all communications activities. [AC22]

Incident Management Team (IMT)

An Incident Management Team, (IMT), is a multi-agency/multi-jurisdiction team for extended incidents, formed and managed at the State, regional, or metropolitan level. An IMT is deployed as a team of 8-24 trained personnel to manage major and/or complex incidents requiring a significant amount number of local, regional, and state resources, as well as incidents that extend into multiple operational periods and require a written Incident Action Plan (IAP).

Communications Response Task Force (CRTF)

The Metro Region CRTF is an ICS trained, all-hazard personnel resource to be used by an agency to assist in the field, the command post, the EOC, or the PSAP. The CRTF can be an expertise or personnel resource and may assist with logistics if the communications or other equipment is necessary. The team will assume radio duties for the incident or event and can be a resource to support troubleshooting and managing equipment or documentation and resource deployment.

Incident Dispatch Team (IDT)

The IDT is comprised of dispatch professionals from around the Metro Region. The team represents multi-discipline PSAP personnel (police fire, EMS) ready to deploy and bring the unique skills of the dispatcher to augment incident management at an incident or event. The IDT also serves as Minnesota's Telecommunications Emergency Response Taskforce (MN-TERT) under the National Joint TERT Initiative and is recognized nationally.

The Metropolitan Emergency Services Board (MESB) supports the CRTF and IDT/MN-TERT. The CRTF or MN-TERT can be requested for assistance at an emergency event by contacting the Minnesota State Duty Officer.





What An IMT Can Do For You

Provide individuals or an entire team with expertise in the following areas:

- Operations
- Logistics
- Incident Commander—Liaison officer
- Planning—Safety
- Finance—personnel cost, equipment cost, etc.
- Public Information Coordinator
- Perform specific functions, manage a designated part of an incident, or manage the entire incident through a Delegation of Authority.

Provide the following to your jurisdiction:

- Frequent updates on activities
- Detailed records of incident costs
- Tracking of resources
- Documentation of expenditures, claims, labor, and legal issues for the incident
- A written incident action plan for each operational period that includes objectives, strategies, tactics, current resources, and plans for communications, safety, and logistics for the incident.

Section VIII: Compliance and Conflict Resolution

The suggested method for reporting conflicts noticed by dispatchers is to attempt a resolution through direct contact with the PSAP or dispatcher involved. If direct contact with the PSAP or dispatcher is not an option, the issue should be documented and forwarded to your supervisor. The supervisor or PSAP manager should attempt to obtain a resolution with the other PSAP. However, if a conflict is not able to be resolved at this level, the issue should be brought to the regional user/owner and operator committee level. For more information, see State Standards 7.1.0, 7.2.0, and 7.3.0.

Section VIIIIX: Refresher Training Plan

While it is the responsibility of each agency to establish their own dispatch refresher training at least every two years, [AC23] it is imperative to keep personnel up-to-date on the latest technological innovations, as well as applicable local, regional, and state guidelines/mandates.

It is a the workgroup's best practice recommendation that ARMER online equipment and console training modules be reviewed annually, at a minimum. In addition, the Minnesota Dispatchers Communications Best Practice Guide should become part of every agency's new trainee curriculum, and it should also be reviewed periodically in training sessions for current employees.

Online training modules are available to all users. may be obtained through the Alexandria Technical & Community College website at These courses, created on behalf of the Statewide Emergency Communications Board (SECB) and reviewed and approved by subject matter experts, are hosted through the Alexandria Technical & Community College online website. They can be accessed from ECN's website under ARMER Standards.



A user name and password will be needed for these training modules, and instructions for obtaining these are posted on ECN's website under ARMER standards. , or by contacting the Statewide Interoperability Program Manager at Brandon.Abley@state.mn.us. To obtain user name and password information for the Alexandria Technical & Community College online training, please contact Linda Muchow at 320-762-4539, 1-888-234-1313, or via email at lindac@alextech.edu.

Section ~~IX~~: Other Best Practice Guides

Fire
Emergency Management/Public Health
Dispatch
Public Works
EMS/Hospitals

These guides have been created as a result of diligent work by the groups involved. These guides provide direction for their respective public safety disciplines and are available online. Access to completed Best Practice Guides is available at: <https://dps.mn.gov/entity/SRB>

Section ~~XI~~: Minnesota Emergency Communication Networks Contacts

~~**Jackie Mines**, DECN, Director
jackie.mines@state.mn.us, 651-201-7550~~

~~**Brandon Abley**, Statewide Interoperability Program Manager
Brandon.Abley@state.mn.us 651-201-7554~~

~~**Bill Bernhjelm**, DECN North Regional Interoperability Coordinator
william.bernhjelm@state.mn.us ~~218-349-3531~~ [AC24]~~

~~**John Tonding**, DECN Central/Metro Regional Interoperability Coordinator
—763-587-8234~~

~~**Steve Borchardt**, DECN South Regional Interoperability Coordinator,
~~507-398-9687~~ [AC25]~~

~~DECN Grants Project Coordinator, 651-201-7555~~

~~**Dana Wahlberg**, 911 Program Manager, DECN
dana.wahlberg@state.mn.us, 651-201-7546~~

~~For current email contact information, please see Staff Contacts on the ECN website:
<https://dps.mn.gov/divisions/ecn/Pages/default.aspx>~~



Section XII: Regional Emergency Communications Boards/Emergency Services Boards Radio and Advisory Committee Contacts

Contacts for the Regional Emergency Communications Boards/Emergency Services Boards Radio Boards (ECB/ESBRRB) and Regional Advisory Committees (RAC) can be found on the ECN ARMER website under: <https://dps.mn.gov/entity/srb/regions/pages/default.aspx> ^[AC26]

[Dps.mn.gov/entity/SRB](https://dps.mn.gov/entity/SRB)

Section XIII: Dispatchers Best Practice Workgroup

Chair Rick Juth — Rick.Juth@state.mn.us

Bill Lewis — Bill.Lewis@state.mn.us

Bob Dickhaus — Robert.Dickhaus@co.stearns.mn.us

Brandon Hendrickson — Brandon.Hendrickson@co.Jackson.mn.us

Cathy Anderson — Cathy.Anderson@state.mn.us

Christine Kuennen — Christine.Kuennen@metc.state.mn.us

Craig Brekke — craig.brekke@mspmacc.org

Curt Meyer — Curtis.meyer@co.hennepin.mn.us

Dawn Goman — Dawn.Goman@state.mn.us

Joe Reith — jreith@co.murray.mn.us

John Tonding — John.Tonding@state.mn.us

Lynette Ancel — lancel@co.scott.mn.us

Steve Olson — Steve.Olson@co.lake.mn.us

Steven Borchardt — Steven.Borchardt@state.mn.us

Toni Clarin — Toni.Clarin@co.mille-lacs.mn.us

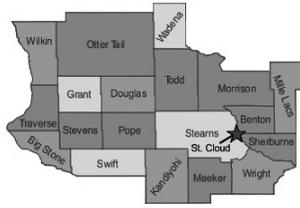
Wendy Lynch — Wendy.Lynch@hcmcd.org

William Bernhjelm — William.Bernhjelm@state.mn.us

Tom Johnson

Section XIV: Radio Affiliated Acronyms

Link to commonly used radio affiliated acronyms — <https://dps.mn.gov/entity/SRB> , click on ARMER and then click on Acronyms.



CENTRAL MINNESOTA EMERGENCY SERVICES BOARD
 FINANCE (320) 255 - 7208
 FAX (320) 255 - 7297

MEMORANDUM

To: Jackie Mines, ECN
 From: Jim McMahon, CMESB Chair
 Subject: Representation on SECB Committees
 Date: December 8, 2015

Dear Ms. Mines:

The Central MN RAC currently holds the following positions on the SECB Committees subcommittee of the Statewide Emergency Communications. We recognize the value and importance of these committees and we are committed to supporting its work.

As chair of the Central MN ESB, I would like to designate CMNESB members listed below to be appointed as the representatives for CMNESB to the SECB Committees listed below.

Currently the Central Region has the following representation on SECB Committees:

Committee	De l e g a t e	A l t e r n a t e
OTC	Kristen Lahr	Al Fjerstad
L e g i s l a t i v e	J e f f J e l i n s k i	Micah Myers
*Steering	Tina Lindquist	Kristen Lahr
Finance	Micah Myers	
* Interoperability	Micah Myers	Kristen Lahr
IPAWS	Patrick Waletzko	E r i n H a u s a u e r
Interoperability Data	Kristen Lahr	B r a n d o n L a r s o n
NG911	Judy Diehl	Tina McPherson

*Region 4 EMAC has a representative also Mike Wisniewski (Interoperability)

*Training Subcommittee (Steering Committee) Tina Lindquist

We feel that this would make a good discussion item for the regional quarterly meetings.

Thank you for your consideration in this matter.

Sincerely,

Jim McMahon

Northwest Minnesota Radio



Northwest Regional Emergency
Communications Board
C/O Headwaters RDC
PO Box 906
Bemidji, MN 56619

Phone: 218.333.6533
Email: mfitzgerald@hrdc.org

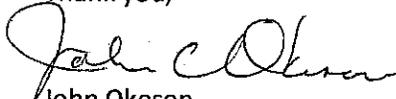
February 16, 2016

Jackie Mines, Director
Emergency Communications Networks
Minnesota Department of Public Safety

Director Mines,

This letter is to notify you that Neil Dolan was appointed as the new primary representative from the Northwest Region on the Operations and Technical Committee, replacing Shane Richard. This appointment was approved by the NWRECB and NW RAC on January 13, 2016. Brian Zastoupil will remain the alternate for this group.

Thank you,


John Okeson
NWRECB Chair

STATEWIDE EMERGENCY COMMUNICATIONS BOARD

Operations & Technical Committee

MEMBER	REPRESENTING	ALTERNATE
<p>Committee Chair: Joe Glaccum North Memorial Ambulance 4501 68th Avenue North Brooklyn Center, MN 55429 Phone: 763-581-9905 joe.glaccum@northmemorial.com nancy.sundberg@northmemorial.com</p>	<p>Minnesota Ambulance Association Metro Area</p>	<p>VACANT</p>
<p>Vice Chair Dave Thomson Rochester Police Department 101 4th Street SE Rochester, MN 55904 Phone: 507-328-6751 dthomson@rochestermn.gov</p>	<p>Minnesota Chiefs of Police Association</p>	<p>VACANT</p>
<p>John Gundersen Assistant Radio Communications Manager 9300 Naper Street Golden Valley, MN 55427 Phone: 612-596-1921 john.gundersen@co.hennepin.mn.us</p>	<p>Metropolitan Emergency Services Board</p>	<p>Ron Jansen Dakota County 2860 160th Street West Rosemount, MN 55068 ron.jansen@co.dakota.mn.us</p>
<p>Tim Lee Water's Edge - Office of Statewide Radio Communications 1500 W. County Road B-2 Roseville, MN 55113 Phone: 651 234-7963 tim.lee@state.mn.us</p>	<p>Minnesota Department of Transportation</p>	<p>Jim Mohn Water's Edge - Office of Statewide Radio Communications 1500 W. County Road B-2 Roseville, MN 55113 Phone: 651 234-7969 jim.mohn@state.mn.us</p>
		<p>Mukhtar Thakur Water's Edge – Office of Statewide Radio Communications 1500 W County Road B-2 Roseville, MN 55113 Phone: 651-234-7962 mukhtar.thakur@dot.state.mn.us</p>

STATEWIDE EMERGENCY COMMUNICATIONS BOARD

Operations & Technical Committee

MEMBER	REPRESENTING	ALTERNATE
Tim Boyer Minnesota State Patrol 444 Cedar Street, Suite 130 St. Paul MN 55101-5130 651-757-1980 Timothy.Boyer@state.mn.us	Minnesota State Patrol	VACANT
Neil Dolan neil.dolan@co.clearwater.mn.us	Northwest Region	Brian Zastoupil bzastoupil@cityoffargo.com
Bruce Hegrenes St. Louis County – Sheriff Office 2030 N. Arlington Avenue Duluth, MN 55811 218-726-2933 218-348-4100 hegrenesb@stlouiscountymn.gov	Northeast Region	Monte Fronk Monte.Fronk@millelacsband.com
Terry Wesley 507-934-0264 twesley@co.nicollet.mn.us	South Central Region	Darrin Haeder 410 South 5th Street PO Box 8608 Mankato, MN 56002 Phone: 507-304-4159 darrin.haeder@co.blue-earth.mn.us
Kristen Lahr 807 Courthouse Square PO Box 217 St Cloud, MN 56302 Phone: 320-290-9151 Kristen.lahr@co.stearns.mn.us	Central Region	Al Fjerstad Phone: 320-983-8288 al.fjerstad@co.mille-lacs.mn.us
Rick Freshwater Olmsted County Sheriff's Office 101 4 th St SE Rochester, MN 55904 Phone: 507-285-8048 Other: 507-254-0067 freshwater.rick@co.olmsted.mn.us	Southeast Region	David Pike

STATEWIDE EMERGENCY COMMUNICATIONS BOARD

Operations & Technical Committee

MEMBER

REPRESENTING

ALTERNATE

Captain M.G. Hamann

Pipestone County Sheriff's Office
PO Box 220
418 Hiawatha Ave.
Pipestone, MN 56164
Phone: 507-215-1903
mike.hamann@co.pipestone.mn.us

Southwest Region

Kim Hall

Emergency Management Director
Cottonwood County
902 5th Avenue, Suite 101
Windom, MN 56101
Cell: 507-822-3214
Kimberly.hall@cottonwood.mn.us

Allied Radio Matrix for Emergency Response



ARMER

Project Status Report

Reporting Period February 1, 2016 through March 1, 2016

Executive Summary

Overall Status:

	Green (Controlled)	Yellow (Caution)	Red (Critical)	Reason for Deviation
Budget	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	
Schedule	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>	Land acquisition delays will impact completion of some sites
Scope	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	

ARMER
Backbone
97%
On-the-air

Controls

Issue Status:

Change Status:

- No pending plan changes

Accomplishments

Accomplishments during this Reporting Period:

- The following sites went on the air:

- The land acquisition has been completed for the following sites:

Budget

Construction Budget Status as of March 1, 2016

Project Funding	Original Budget	Spent to Date	Unspent Balance Remaining	Encumbered	Available Balance
Phase 3	\$45,000,000	\$44,952,397.19	\$47,602.82	\$0.00	*COMPLETE
SRB Funds (FY 09)	\$1,902,831.00	\$1,902,831.00	\$0	\$0	COMPLETE
Phase 456 (FY 09)	61,996,957.89	\$61,981,069.99	\$15,887.90	\$15,887.90	\$ 0.00
Phase 456 (FY 10)	\$62,015,407.77	\$61,908,947.77	\$106,460.00	\$106,460.00	\$ 0.00
Phase 456 (FY 11, 12, 13)	\$61,987,634.34	\$53,263,098.99	\$8,724,535.35	\$3,194,072.18	\$ 5,530,463.17
Total Phase 456	\$186,000,000.00	\$177,153,116.75	\$8,846,883.25	\$3,316,420.08	\$ 5,530,463.17
Projected Contingency as of March 1, 2016					\$305,463.17

Comments:

Scheduled Milestones / Deliverables

Status updated March 1, 2016

Milestone	Total Sites	Sites Not Started	Sites in Progress	Sites Complete
ARMER Backbone Construction	335 Sites			
Tower Site Acquisition	335	0	8	
Tower Construction & Site Development Work	335	8	5	
Microwave Connectivity & RF Deployment	335	11	0	326 On the Air

Some Sites are on the air, but on the old towers or temporary towers. They are counted as on the air, but still require construction and/or installation at the new tower sites before they are complete:

- o Finland
- o Duluth South
- o Eden Valley
- o Lake Crystal

Of the 326, 4 are on temporary sites; sites construct and move still in the works.

- SE – all sites completed
- SR – 2 land acquisitions remaining, 1 new site plus leased site replacement for Lake Crystal.
- SW – all sites completed
- CM – 1 land acquisitions remaining, leased site replacement for Eden Valley.
- Metro – all sites completed
- NW – 2 land acquisitions remaining.
- NE – 3 land acquisitions remaining, 5 site under construction.

Completion Targets

ARMER all Phases:

4 original plan sites will be delayed due to delays in land acquisition.

Ongoing ARMER System Work**Motorola System Upgrade**

- 7.15 upgrade scheduled to begin May 2016. Lock down for any system changes prior to the 7.15 upgrade will be around the beginning of April 2016.
- Motorola 2016-2020 Support services contract is completed.
- Working on contracts for billing with local agencies involved in 7.19 equipment replacements under the Motorola contract.
- Notice for 2016 Motorola SUAll local agency billing amounts will be sent out will do actual billing invoices in March.

Site improvements

- Still working on the addition of card key reader to the equipment shelters. Parts are in. Working on installs, 95% of the sites completed.
- We are continuing our review of our leased sites/land. Plans had always been to build towers in these areas, but to get the project moving we leased sites to get on the air. In review of some of the land and lease cost it would make sense to find land in these areas and build towers. Also looking at long term land lease from private parties, would prefer to have towers we own on state, County or City owned land.
- Replace Lake Crystal leased site with 2 new sites. This adds a new site to the area.

Microwave improvements

- At this point we have identified one bad path where an intermediate microwave site is needed. So we are looking to add a microwave site somewhere in the Cromwell area to split the Lawler – Moose Lake link. Working with the County, a site has been identified. Need to work through the acquisition and easements.
- We are also working to get the DC power systems updated at all sites to improve system reliability. Battery system install is nearing completion.
- Still reviewing microwave performance, ongoing.

VHF interop layer

- VPN access for access to MotoBridge network has been worked out. Remote access is now working.
- Working on plans in the metro area to simplify the VHF interop layer as we move from Gold Elites to 7500s.

Old towers that need replacement

- We have a number of towers that are on the air for ARMER that are old towers constructed in the 50's. These towers did not pass structural when we added the new ARMER equipment. But the level of structural deficiency was not a risk that required immediate replacement. So we have held off on replacement of these towers to see where we were in the ARMER budget to build what we had planned. We are still holding off on these until we are a little further along with ARMER. Towers not replaced under the ARMER project will be scheduled for replacement as the ARMER maintenance budget allows, estimate 1 to 2 per year until completed.

ARMER Construction Budget (Remaining Work)

Unencumbered Fund Balance (As of March 1, 2016)					\$5,530,463.17
Site Name <small>(Green - site on air)</small>	County	Description	Land/ Construction	Estimate to Complete	Balance
Finland	Lake	Replace Tower	Envir	\$440,000.00	\$5,090,463.17
NE Lake County	Lake	New tower	DNR/Envir	\$930,000.00	\$4,160,463.17
Lima Mt	Cook	New tower	DNR/Envir	\$880,000.00	\$3,280,463.17
Red Lake	Beltrami	New tower	Indent Land	\$505,000.00	\$2,775,463.17
Eden Valley	Meeker	New tower	Envir/Lease	\$500,000.00	\$2,275,463.17
Lake Crystal	Blue Earth	New tower	Envir/Lease	\$575,000.00	\$1,700,463.17
Madelia	Watonwan	New tower	Envir	\$350,000.00	\$1,350,463.17
Molde	St Louis	Replace fire tower	DNR/Envir	\$320,000.00	\$1,030,463.17
Berner	Clearwater	New tower	Indent Land	\$505,000.00	\$525,463.17
PENDING WORK					
Card Key				\$20,000.00	\$505,463.17
Site clean up, shelter and tower removals				\$200,000.00	\$305,463.17
MSO - Backup equipment				\$0.00	\$305,463.17
Microwave DC power - Upgrades to meet run time required				\$0.00	\$305,463.17
TOWER REPLACEMENTS (This work being held until above projects completed)					
Hawley	Replace tower			\$600,000.00	
Freedhem	Replace tower			\$600,000.00	
Middle River	Replace tower			\$600,000.00	
Theif River Falls	Replace tower			\$600,000.00	
Windom	Replace tower			\$600,000.00	
Virginia	Replace tower			\$600,000.00	
Cass Lake	Replace tower			\$600,000.00	
Viola	Replace tower			\$600,000.00	
Kimball	Replace tower			\$600,000.00	
Hoffman	Replace tower			\$600,000.00	
New London	Replace tower			\$600,000.00	
Woodland	Replace tower			\$600,000.00	
Littlefork	Replace tower			\$600,000.00	
Roosevelt	Replace tower			\$600,000.00	
Hewit: Land Purchase, replace tower.				\$500,000.00	
Scandia: Need to look at land purchase.				\$100,000.00	
Geneva: Need to look at land purchase, new tower ?				\$500,000.00	
Mapleton: Find land and build new tower				\$500,000.00	
Red Wing: Land purchase				\$100,000.00	



Monthly Project Summary

James Stromberg
ARMER Program Manager & Statewide Interoperability Coordinator

Date	February 29, 2016			
Project	7.19 Upgrade Monitoring			
Progress	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	On Track			

Summary
<p>The project objective is to monitor the ARMER 7.19 upgrade to ensure that hardware and software upgrades are installed consistent with contract.</p> <p>The key steps are:</p> <ul style="list-style-type: none">• Meet with Motorola and MnDOT to identify tracking process.• Create a tracking tool to monitor process

Current Status
<ul style="list-style-type: none">• First meeting with MnDOT and Motorola was held. Discussions about how to best and most efficiently roll out upgrade. Follow up meetings to be scheduled with Rochester, St. Cloud, and Metro regions. Awaiting scheduling of follow up meetings.

Challenges
<ul style="list-style-type: none">• No specific challenges are apparent

Talkgroup Authorization Requests are considered by the talkgroup's owner (city, county, or region) and should be submitted to that entity. Record of the authorization should be maintained by the authorizing entity and, if applicable, the entity's sponsoring agency.



Monthly Project Summary

James Stromberg
 ARMER Program Manager & Statewide Interoperability Coordinator

Date	February 29, 2016			Committee Priority	OTC
Project	Change Management				
Progress	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
	On Track				

Summary
<p>The project objective is to review, revise, and implement a new Change Management process and state standard.</p> <p>The key steps are:</p> <ul style="list-style-type: none"> • Create a working group to address the issue • Refine the current process • Carefully consider timelines of state and local budget cycles as part of the process • Memorialize new process in an updated standard • Seek approval of the new process and standard from OTC and SECB

Current Status
<ul style="list-style-type: none"> • Workgroup has met, identified a new process, and drafted a new standard • Draft standard being refined and is still under consideration

Challenges
<ul style="list-style-type: none"> • No specific challenges are apparent

Talkgroup Authorization Requests are considered by the talkgroup's owner (city, county, or region) and should be submitted to that entity. Record of the authorization should be maintained by the authorizing entity and, if applicable, the entity's sponsoring agency.



Monthly Project Summary

James Stromberg
 ARMER Program Manager & Statewide Interoperability Coordinator

Date	February 29, 2016		Committee Priority	OTC & IOC
Project	Strategic Reserve Equipment Review			
Progress	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	On Track			

Summary
<p>The project objective is to review the current practices associated with the strategic reserve equipment and to explore ways to enhance the usability and availability of the equipment.</p> <p>The key steps are:</p> <ul style="list-style-type: none"> • Identify and catalogue all Strategic Technology Reserve equipment • Identify custodians of STR equipment • Identify current practices in place to exercise and test equipment • Evaluate current practices and explore new ways to ensure equipment is ready • Identify working group to review Standards and to consider updates • Encourage use of equipment through training and exercises

Current Status
<ul style="list-style-type: none"> • SharePoint tool under development to track all STR equipment, custodians, and reviews.

Challenges
<ul style="list-style-type: none"> • No specific challenges are apparent

Talkgroup Authorization Requests are considered by the talkgroup's owner (city, county, or region) and should be submitted to that entity. Record of the authorization should be maintained by the authorizing entity and, if applicable, the entity's sponsoring agency.



Monthly Project Summary

James Stromberg
 ARMER Program Manager & Statewide Interoperability Coordinator

Date	February 26, 2016		Committee Priority	IOC & OTC
Project	Website Updates of ARMER and Interop Pages			
Progress	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	On Track			

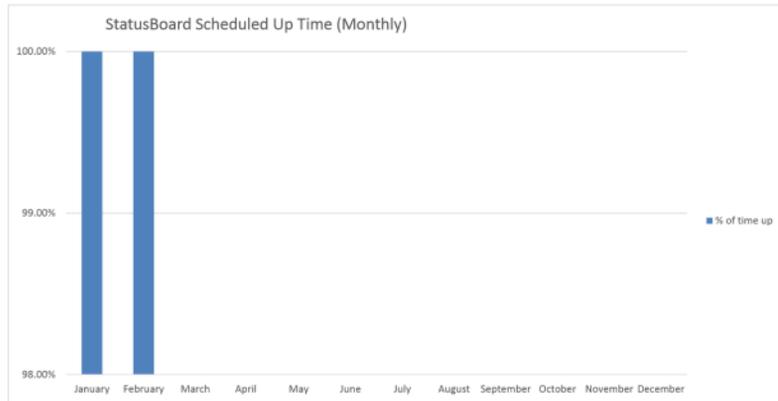
Summary
<p>The objectives of this project are:</p> <ul style="list-style-type: none"> to define a clean, efficient look and feel for the ECN website so that information is plainly presented and easy to find to provide guidelines and a roadmap for refinement of other ECN webpages to reorganize and clean up the ARMER pages of the ECN website to reorganize and clean up the Interoperability pages of the ECN website <p>The key steps are:</p> <ul style="list-style-type: none"> Take inventory of the current ECN website, in its entirety Work with DPS Communications to create a plan of action Identify and implement global site changes necessary to ensure uniformity Identify and implement changes specific to the ARMER and Interoperability pages Add content to the new ARMER and Interoperability pages and seek approval for publishing Publish the update pages

Current Status
<ul style="list-style-type: none"> A full inventory of the ECN website has been taken and outlined on a spreadsheet. DPS Communications has been engaged and supports the proposed look and feel changes DPS Communications is willing to review requested changes for policy compliance and to make the requested changes A cleaned up look and feel has been defined for the ECN website New content for several of the ARMER and Interoperability webpages is drafted but awaiting the actual page for it to be placed A request has been made of DPS Communications to make 40 different website changes that could not be made by ECN staff. The requests were prioritized with 14 of the requests identified as a first priority. ECN is waiting on DPS Communications office follow up.

Challenges
<ul style="list-style-type: none"> ECN staff does not have authority to change page architecture, only content. Look and feel changes, page additions and deletions, and webparts (e.g. automatic lists) may only be done by DPS Communications staff. Defining the request via work tickets and waiting for the change to be made is a tedious and sluggish process.

Talkgroup Authorization Requests are considered by the talkgroup's owner (city, county, or region) and should be submitted to that entity. Record of the authorization should be maintained by the authorizing entity and, if applicable, the entity's sponsoring agency.

StatusBoard Unscheduled Down Time								
Date	Time Down Military Time	Time Up Military Time	Total Unscheduled Down Time HH:MM	Scheduled Availability HRS	Actual Availability HRS/MIN	% of time up	Cause	Actions



StatusBoard CY 2016

	Total Hours Month	Total hours SCHEDULED MAINTENANCE Tues. 0900 - 1100 Wed. 1900 - 2300	Total Hours SCHEDULED Availability	Actual Duration of maintenance Rounded up to nearest hour	Total hours available AFTER scheduled maintenance	UNSCHEDULED OUTAGES Rounded up to nearest hour	TOTAL HOURS AVAILABLE	YTD Availability
January	744	24	720	0	744	0	744	100.00%
February	696	24	672	0	696	0	696	100.00%
March	744	30	714					
April	720	24	696					
May	744	28	716					
June	720	26	694					
July	744	24	720					
August	744	30	714					
September	720	24	696					
October	744	24	720					
November	720	30	690					
December	744	24	720					