



METROPOLITAN EMERGENCY SERVICES BOARD 9-1-1 TECHNICAL OPERATIONS COMMITTEE AGENDA

February 15, 2024 10:00 a.m.

1. **Call to Order & Introductions** – Susan Bowler, 2024 Committee Chair
2. **Approval of Agenda** – Bowler
3. **Approval of Minutes** – January 18, 2024 Meeting – Bowler
4. **Action Items - None**
5. **Discussion Items**
 - A. Presentation: “Factors Driving EMS Incidents and their Impact on Agencies” Greg Hayes, MESB
 - B. SECB Grant – Jacobson
 - C. Regional Needs Study – Jacobson
 - D. Verizon Misroutes – Tony Martin
 - E. Mental Health Call Processing Standard – Tony Martin
6. **Reports**
 - A. PSAP Operations Roundtable Workgroup – Heidi Meyer
 - B. SECB NG9-1-1 Committee Report – Janelle Harris/Brent Anderson
 - C. 9-1-1 GIS and Data Report (attached) – Marcia Broman
 - D. 9-1-1 Network Report (attached) – Jacobson
 - E. MN Sheriff’s Assoc. PSAP Subcommittee Report – Bowler
 - F. IPAWS Report – Kari Morrissey
 - G. SECB NG9-1-1 Technical Operations Workgroup – Scott Petersen
 - H. SECB NG9-1-1 Operations Workgroup – Morrissey
7. **New Business - None**
8. **Announcements/Roundtable**
 - A. Next Meeting: Thursday, March 21, 2024, 10:00 am.
9. **Adjourn** – Bowler

**Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
Meeting Minutes
January 18, 2024**

Committee Members Attendance:

Airport – absent	M Health EMS – Elias Charif
Allina EMS – absent	Metro Transit – Chad Ladda
Anoka County – Kari Morrissey	Minneapolis – Joni Hodne, Chad Ladda
Bloomington – Lavae Robinson	North Memorial – absent
Carver County – Susan Bowler	Ramsey County – Dan Palmer
Chisago County – Mike Parker	Ridgeview EMS - John Scheuch
Dakota County – Heidi Hieserich	Scott County – Kari Bauer
Eden Prairie – absent	Sherburne County - Lauri Anderson
Edina – Janelle Harris	St. Louis Park – Eric Lammler
Hennepin County – Tony Martin	U of M – Robin Carter
Hennepin EMS – Daniel B. Klawitter	Washington County - Darlene Pankonie
Isanti County – Robert Shogren	

Alternates/Guests:

Breanna Beach, *BCA*; Leticia Cardenas, *Minneapolis*; Brandy Christensen, *BCA*; Scott Haas, *Scott County*; Lisa Kelly, *Intrado*; Dawn Kenyon, *HCSO*; David Mina, *Intrado*; Heidi Meyer, *Anoka County*; Dave Reger, *Ramsey County*; Dave Taylor, *IES*; and Kent Wilkening, *ECN*

MESB Staff: Tracey Frederick; Jake Jacobson; and Jacob Kallenbach

1. Call to Order – Susan Bowler

Susan Bowler, the 2023 9-1-1 TOC Committee Chair, called the meeting to order at 10:04 a.m.

2. Approval of Agenda

Motion made by Darlene Pankonie, seconded by Joni Hodne to approve the January 2024 9-1-1 TOC meeting agenda. Motion carried.

3. Approval of Minutes

Motion made by Pankonie, seconded by Tony Martin to approve the November 2023 9-1-1 TOC meeting minutes. Motion carried.

4. Action Items

A. SECB NG9-1-1 Operations Workgroup Nomination

Motion made by Martin, seconded by Pankonie to nominate Kari Morrissey as the representative to the SECB NG9-1-1 Operations Workgroup. Motion carried.

B. NIOC Nomination

Motion made by Robinson, seconded by Hieserich to nominate Pankonie to the NIOC. Motion carried.

5. Discussion Items

A. Regional BCA Presentation

Breanna Beach of BCA provided an update on agency policies regarding audits and provided a packet full of information detailing these updates. BCA audits, preparation, and training opportunities were all discussed. If you have any questions regarding the audit process, please contact your BCA Auditor.

Pankonie suggested reaching out to the service desk to enquire about fixing the email coding to provide a mass email message instead of the current individual process to create more efficiency.

B. Presentation: Intrado/VIPER and i3 Compatibility

Intrado David Mina presented. Power Point Deck provided to TOC members in the subsequent Friday Communication.

C. SECB Grant

The SECB grant and training RFP discussion summarized:

Consider putting out an RFP for an application or software. (Virtual Academy, Break the Stigma, were all mentioned by name)

Consider an in-person 4-8 hour facilitated class, rather than the train-the-trainer courses which were unpopular among the group.

Consider Leadership training to recognize burnout and when your staff may need intervention/resiliency training.

Consider focusing on the metro agencies which still need to implement these methods; those that already have peer support in place maybe don't need this training.

D. Mental Health Awareness Training Grant Allocation

Tracey Frederick stated that there will be mental health crisis training in March, April, and May. If anyone wants to attend these sessions, please reach out to Tracey and the grant allocation can help pay for these opportunities.

E. Regional Needs Document

Frederick stated that the regional needs document is being created. If you have a "wish list" or any agency needs that could be filled by legislative funding for the 2025 legislative session, please fill it out with detailed item information and dollar amounts. The final list will be done in April.

Pankonie mentioned that PSAP backup centers could be included in this list.

F. Verizon Misroutes

Martin stated that there has been no new updates since October, and he hasn't seen any recent misroutes. If you do get a misroute, please reach out to them with detailed information on the call.

G. Mental Health Call Processing Standard

Martin stated that the group meets and continues to work on the standard. They are currently in the process of finalizing the 9-88 information fact sheet.

6. Reports

A. PSAP Operations Roundtable Workgroup

Heidi Meyer stated that she will send out a summary of the meeting minutes to the group.

B. SECB NG9-1-1 Committee Report

Janelle Harris provided an update on the committee. There is a stakeholder meeting on January 30. There will be a “communication in acts of violence” training on January 31. Please continue to recognize telecommunicators and send their information in for recognition. New standards will be circulated in the upcoming weeks. New RFPs are in stasis and waiting to advance.

C. 9-1-1 GIS and Data Report

The report is attached to the meeting materials.

D. 9-1-1 Network Report

The report is attached to the meeting materials.

E. MN Sheriff’s Association PSAP Subcommittee Report

The subcommittee talked about recruitment efforts and will meet again in late January.

F. IPAWS Report

Kari Morrisey stated that there is some good training in message writing. She said there will be more updates after the meeting in February.

G. SECB NG9-1-1 Technical Operations Workgroup

No new updates.

H. SECB NG9-1-1 Operations Workgroup

No new updates.

7. New Business – None

8. Announcements

A. Next meeting: Thursday, February 15, 2024, 10:00 a.m.

B. Consoles

Chad Ladda mentioned that they need new consoles and are looking for advice. Please reach out to him if you can help and provide information.

9. Adjourn

The meeting was adjourned at 12:02 p.m.



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date:
Agenda Item:

February 15, 2024
5B Discussion: SECB Grant
Presenter: Jacobson

RECOMMENDATION

This is being brought to the Committee to provide direction on best uses for the Statewide Emergency Communications Board (SECB) grant allocation. The purpose of discussion is to review possibilities and options for use of the SECB Grant and begin the winnowing process needed on how best to use the funding.

BACKGROUND

As part of the biannual SECB grant process, the SECB awarded the MESB region \$75,000 for Resiliency Training. However, only half (\$37,500) is available from January 1-June 30, 2024; the other half (and any unspent from the first half) will be available July 1, 2024-June 30, 2025.

Given the nature of the grant process and dates of allocations, the grant will need to follow the standard RFP process.

ISSUES & CONCERNS

The RFP needs to be released before the next 9-1-1 TOC. The MESB Staff needs direction from this group for what to include in the RFP. Grant funds need to be fully spent by June 30, 2025.

Below, collective thoughts provided by PSAPs from January TOC, emails and informal discussion.

- **Ranges of training dimensions to consider --**

PST ↔ PST Supervisor/Manager

Online ↔ Classroom

All PSAPs ↔ PSAPs with acute needs

Off the shelf ↔ Tailored to PSAP Needs

Traditional ↔ Outside the box

One-time-focus ↔ Align w developing Comprehensive Stress Resilience Plan (CSRP)

MOTION BY:
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MOTION:

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METROPOLITAN EMERGENCY SERVICES BOARD

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- **Online Systems mentioned:**
 - Cordico Home - Cordico;
 - Course Category | Virtual Academy
 - Mindbase
 - <https://www.breakthestigma.org/>
 - Pathfinder Resilience (b2cstudios.net) – from PSAP Director attending NENA meeting.

- **Considerations from PSAP input:**
 - “...Most of PSTs need to be at work to access shared files, sites, or dig through email to locate wellness related resources. We live in such a mobile-focused society, online applications make it easier for people to engage in their wellness or reach out and get help. ...”

 - “...Some platforms offer insights into agency trends, so managers can be informed on team needs and take that into account with program management. For example, say there is a spike in team members reaching out for support (don’t worry, still confidential), it could flag our attention to help us be more informed as well....”

FINANCIAL IMPACT

None to MESB.

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SECONDED BY:
MOTION:

PASS/FAIL



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: February 15, 2024
Agenda Item: 5C Discussion: Update of MESB
Regional Needs Document
Presenter: Jacobson

RECOMMENDATION

Discussion only; no action needed at this time. This will require committee action no later than its April 2024 meeting.

BACKGROUND

In 2023, each region of the Statewide Emergency Communications Board (SECB) was requested to compile a list of Regional Emergency Communications Needs, to seek potential funding from the Minnesota State Legislature. All seven SECB regions submitted a document by May 2023 (see attached: document from MESB for last year). More recently, there was an ask from the SECB Finance Committee for each region to complete this document on an annual basis and submit it by the committee's May meeting. The MESB Regional Needs Document will need to be approved by the Board at its May meeting, with Final Draft for TOC approval no later than its April meeting. The Regional Needs Document update will be required for both 9-1-1 and Radio TOCs.

ISSUES & CONCERNS

Input will be sought over in next month's meetings. Due to time constraints in 2023, last year's MESB Regional Needs document was taken heavily from the Funding Priorities document. It is recommended for TOC membership to document all its needs and include needs since the Funding Priorities were published.

FINANCIAL IMPACT

None to MESB.

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METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: February 15, 2024
Agenda Item: 5C Discussion: Update of MESB
Regional Needs Document
Presenter: Jacobson

9-1-1 Regional Needs Document Items from 2023 are Listed Below:

Computer-Aided Dispatch (CAD)-to-CAD Interoperability Solution

The 24 primary and secondary PSAPs in the metro region desire to acquire a CAD-to-CAD integration solution designed to connect disparate CAD systems for the purpose of expediting emergency response which may cross jurisdictional and PSAP boundaries.

The solution would also provide improved situational awareness for metro region PSAPs. Such a solution was found to be a need in the Metropolitan Emergency Services Board's May/June 2020 Civil Unrest After-Action Report/Improvement Plan. The solution could allow other PSAPs to answer 9-1-1 calls intended for a PSAP which has been inundated with 9-1-1 calls; this will provide 9-1-1 callers with better service in extraordinary situations/events.

Updated from 2023: Estimated Metro Region cost - ~\$500,000 per year, plus one-time implementation costs of approximately \$500,000*

*This item is included in HF 2431/SF 2454

GIS Software Services – School Mapping

With the frequency of mass shootings/armed assailant incidents increasing nationwide, and in reviewing the response to recent school shootings, primarily in Uvalde, TX, the metro region would like to implement school mapping, whereby maps of schools would be available in each PSAP, which could facilitate the location of 9-1-1 callers within the building. Additionally, having these resources available could provide first responders with information that could affect emergency response, such as locations of chemistry labs, etc. which could alter responders' plans.

Updated from 2023: Estimated Metro Region cost: ~\$3.8 million in one-time implementation costs and \$1.5million per year in annual maintenance costs*

*This item included in HF 2431/SF 2454

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MOTION:

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METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: February 15, 2024
Agenda Item: 5C Discussion: Update of MESB
Regional Needs Document
Presenter: Jacobson

GIS Software Services

GIS software services are needed to support the creation, conversion, and maintenance of GIS-derived Master Street Address Guides (MSAGs) for the PSAPs in the ten-county metropolitan region. These services would further integrate the region's legacy 9-1-1 data processes with those needed for NG9-1-1. The outcomes include improving 9-1-1 data accuracy, gaining operational efficiency, and maintaining 9-1-1 data synchronization during the transition to full i3 NG9-1-1 implementation. Additionally, a web-based map viewer will allow for all metro region PSAPs and GIS partners to have visibility to the region's current NG9-1-1 and related geospatial datasets in a secure, shared environment, allowing for seamless data sharing, greater collaboration, and improved data integrity.

Estimated Metro Region cost: ~\$180,000 per year, plus one-time implementation costs of approximately \$30,500 for generalized GIS software services ~\$344,059

Geo-Diverse 9-1-1 Call Handling Equipment (CHE) ESInet Connections

Many Minnesota PSAPs are taking advantage of geo-diverse technology with new CHE platforms that allow for 9-1-1 calls to be delivered to two locations simultaneously. Geo-diverse configurations split the A and B servers typically found at one location, into two separate geo-diverse locations, which allows for additional staff at another location, or PSAP, during extremely busy times or special events to answer 9-1-1 and administrative calls while the main PSAP is still active. It also allows the PSAP to abandon its primary location while the backup location is fully operational and gives the opportunity for a staged evacuation while staff is enroute to the backup location. Additionally, the main PSAP can operate on the connections that exist at its backup location if the main PSAP experiences any technical issues with its connections. To allow for full redundancy and resiliency, each PSAP utilizing geo-diverse CHE should have two Emergency Services Internet (ESInet) connections at each location to ensure the maximum number of 9-1-1 calls can be received at either location at any time, regardless of any problems occurring at the other location. Currently, ECN only pays for two ESInet connections at each PSAP, which is the typical setup for legacy CHE. ECN should reconsider its position and pay for four ESInet connections for PSAPs which implement geo-diverse CHE systems. Having four ESInet connections provides improved resiliency and redundancy for a PSAP's 9-1-1 system and best serves the residents of its jurisdiction.

Estimated Metro Region cost: ~\$12,000 per PSAP per year, or \$216,000 annually in addition to ECN's current costs

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METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: February 15, 2024
Agenda Item: 5C Discussion: Update of MESB
Regional Needs Document
Presenter: Jacobson

Staff Recruitment & Retention

Public safety disciplines, including PSAPs and LMR technology departments, struggle to recruit and retain employees. There is a need to establish a program to actively recruit new staff and to retain employees. The Emergency Medical Services Regulatory Board has established a pilot grant to focus on EMS employee sustainability. Similar programs should be instituted for other public safety disciplines, though with this request the focus is on public safety telecommunicators and system technologists. The metro region would like to contract with a vendor to place targeted recruitment ads via radio, flyers, videos, and social media platforms.

Estimated Metro Region cost: ~\$100,000 per year

Not on 2023 Regional Needs document but funding for Grant Request.

Back-Up PSAP Equipment Cache

Project objective is to establish an equipment cache for 9-1-1 operations that will be available to all MESB JPA partners in the event their centers are not functional. For many years, the thought was to have a physical space available for any partner to go to. This focuses on having equipment available and the partner can utilize any space that is available for operations. This is meant to be for emergency operations when a center has been shut down or needs to be moved. This will allow for operations to continue for any center that may be destroyed, inaccessible, etc.

Estimated Metro Region cost: ~\$43,000 per year

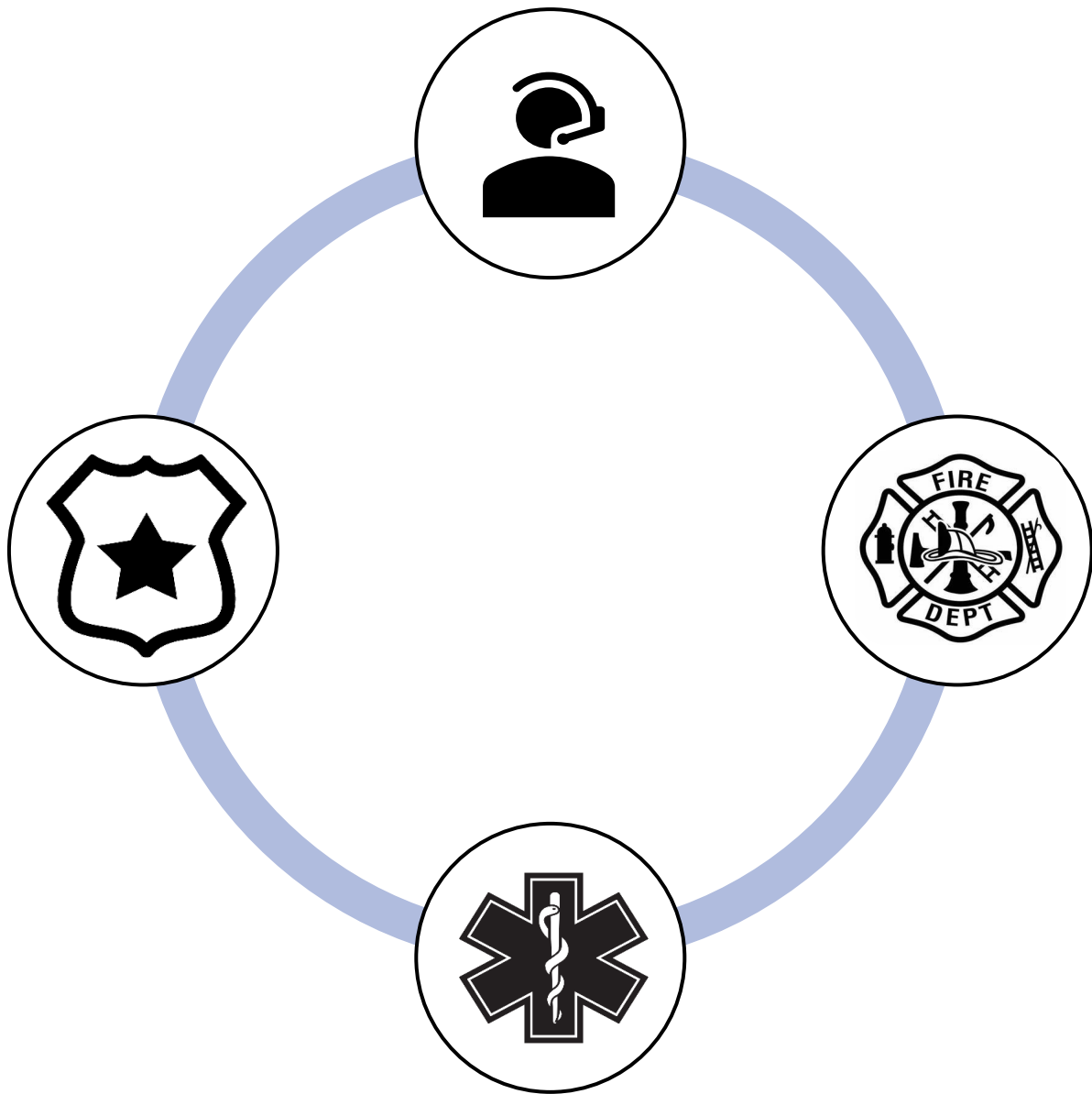
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Metropolitan Emergency Services Board

Regional Needs: The Public Safety Emergency Communications Ecosystem



May 1, 2023

The Metropolitan Emergency Services Board

The Metropolitan Emergency Services Board (MESB) is one of seven regional Emergency Communications Boards (ECBs) and Emergency Services Boards (ESBs) in the state of Minnesota. The MESB was established under MSS 471.59, MSS 403.39 and MSS 403.392 to provide local governance on matters related to emergency communications (9-1-1 and ARMER), as well serving as the regional EMS system for the metro region. The MESB is a joint powers board composed of the following entities: Anoka County; Carver County; Chisago County; Dakota County; Hennepin County; Isanti County; Ramsey County; Scott County; Sherburne County; Washington County; and the City of Minneapolis.

The Public Safety Emergency Communications Ecosystem

With approximately 94,000 active radios (MnDOT, October 2022), the statewide Allied Radio Matrix for Emergency Response (ARMER) system, built by Motorola Solutions and owned and operated by the Minnesota Department of Transportation (MnDOT), provides interoperable Land Mobile Radio (LMR) communication capabilities to 9-1-1 emergency communication centers (ECCs) (also known as Public Safety Answering Points or PSAPs), law enforcement, fire, Emergency Medical Services (EMS), emergency management, public works, and other public safety users across Minnesota.



Construction of the ARMER system in the Twin Cities metropolitan region began in the late 1990s and expanded to include greater Minnesota in the mid-2000s. In late 2020, the MnDOT completed its backbone of the ARMER system buildout. There are now 335 state-maintained and 100 locally maintained ARMER tower sites on-the-air across Minnesota that provide ARMER system radio coverage (mobile only) to 95% of the state's geographic area. Of the 100 locally maintained ARMER tower sites, 54 are in the metro region.

As the ARMER system matures, there is a need to maintain and replace or upgrade aging infrastructure, equipment, and technology. The Statewide Emergency Communication Board (SECB) and state agencies are currently working to develop a capital improvement plan to address this need.

In 1979, the Metropolitan 9-1-1 Telephone Board was formed as a joint powers board of the seven metropolitan counties to plan, design, and implement the first multi-jurisdictional enhanced 9-1-1 (E9-1-1) system in the United States. This system went live at midnight, December 1, 1982, and provided the basis for the statewide buildout of E9-1-1. Today, all 108 PSAPs in the state are part of the statewide 9-1-1 network. Of the 108 PSAPs, 24 are located in the metro region. The 9-1-1 network is in process of transitioning from E9-1-1 to Next Generation 9-1-1, which will provide PSAPs additional abilities to answer texts, receive photos and videos, provide improved 9-1-1 caller location, and provide pre-determined rules for routing of 9-1-1 calls.

Today, the Department of Public Safety contracts and pays for the statewide 9-1-1 system. Local governments pay for costs associated with receiving 9-1-1 calls and dispatching public

safety responders. Local government costs include maintaining the physical PSAP; salaries/benefits for PSAP employees, including public safety telecommunicators (PSTs), administration staff, technical staff, and in some cases, dedicated GIS staff; purchase and maintenance of call handling equipment (CHE) used to answer 9-1-1 calls; purchase and maintenance of communications/radio equipment used to dispatch response to 9-1-1 calls; software or subscription services to maintain the PSAP's 9-1-1 data and services, including GIS data; and software or subscription services to provide Integrated Public Alert and Warning Systems (IPAWS) alerts to the public. Much like the ARMER system, as the 9-1-1 network and 9-1-1 systems continue to evolve, there is a need to maintain, upgrade, or replace aging equipment to allow for new technology to meet the expectations of the public, which would like to communicate with 9-1-1 in the way the public communicates with one another.

Much like hardships of recruitment and retention of staff across public safety disciplines, PSAPs today face difficulty in maintaining a full-complement of PSTs which are needed to answer a PSAP's specific volume of 9-1-1 and administrative calls. PSAPs also face difficulty in recruiting new people to serve as PSTs, as many people do not wish to work in a high-stress environment or work nights, weekends, and/or holidays, which is required in a public safety field.

Funding Considerations



The State of Minnesota's portion of the costs associated with operating the ARMER system is funded through a combination of trunk highway funds, 9-1-1 special revenue funds, and radio tower lease receipts.

Except for PSAP equipment and a limited portion of local infrastructure expenses which can be funded via the 9-1-1 special revenue fund, local costs (including tower site leases, utilities, and system and equipment maintenance) associated with the ARMER system are typically funded via local property tax revenues or per radio charges to ARMER system users in a county. Due to these constraints, public safety agencies

across Minnesota face significant funding challenges related to the escalating costs of maintenance of ARMER system infrastructure, equipment, and technology. Without access to stable, adequate supplemental funding sources, it will be increasingly difficult for local entities to support their ongoing ARMER system maintenance and sustainment needs.

Regional Priorities

Though this document covers region-wide needs only, and does not include individual needs of counties, that is not to say that these regional priorities will not benefit each of the ten metro counties individually. What follows are priorities that metro region agencies agree are a priority.

Computer-Aided Dispatch (CAD)-to-CAD Interoperability Solution

The 24 primary and secondary PSAPs in the metro region desire to acquire a CAD-to-CAD integration solution designed to connect disparate CAD systems for the purpose of expediting emergency response which may cross jurisdictional and PSAP boundaries.

The solution would also provide improved situational awareness for metro region PSAPs. Such a solution was found to be a need in the Metropolitan Emergency Services Board's May/June 2020 Civil Unrest After-Action Report/Improvement Plan. The solution could allow other PSAPs to answer 9-1-1 calls intended for a PSAP which has been inundated with 9-1-1 calls; this will provide 9-1-1 callers with better service in extraordinary situations/events.

Estimated Metro Region cost: ~\$180,000 per year, plus one-time implementation costs of approximately \$30,500*

*This item is included in HF 2431/SF 2454

BDA Requests

Several buildings in the region have been identified as having radio coverage gaps and would benefit from having bi-directional amplifiers (BDA) installed. This would assist first responders with radios be able to assist and be heard on the radio no matter where in a building the responder is located.

Estimated Metro Region cost: ~\$3 million*

*This item included in HF 2431/SF 2454

GIS Software Services – School Mapping

With the frequency of mass shootings/armed assailant incidents increasing nationwide, and in reviewing the response to recent school shootings, primarily in Uvalde, TX, the metro region would like to implement school mapping, whereby maps of schools would be available in each PSAP, which could facilitate the location of 9-1-1 callers within the building. Additionally, having these resources available could provide first responders with information that could affect emergency response, such as locations of chemistry labs, etc. which could alter responders' plans.

Estimated Metro Region cost: ~\$400,000 in one-time implementation costs and \$40,000 per year in annual maintenance costs*

*This item included in HF 2431/SF 2454

GIS Software Services

GIS software services are needed to support the creation, conversion, and maintenance of GIS-derived Master Street Address Guides (MSAGs) for the PSAPs in the ten-county metropolitan region. These services would further integrate the region's legacy 9-1-1 data processes with those needed for NG9-1-1. The outcomes include improving 9-1-1 data accuracy, gaining operational efficiency, and maintaining 9-1-1 data synchronization during the transition to full i3 NG9-1-1 implementation. Additionally, a web-based map viewer will allow for all metro region PSAPs and GIS partners to have visibility to the region's current NG9-1-1 and related geospatial datasets in a secure, shared environment, allowing for seamless data sharing, greater collaboration, and improved data integrity.

Estimated Metro Region cost: ~\$180,000 per year, plus one-time implementation costs of approximately \$30,500 for generalized GIS software services
~\$344,059 for five years for the web-based data viewer, plus \$8,279 in one-time implementation costs.

AES Encryption

The Statewide Emergency Communication Board (SECB) recommends a transition to a higher level of encryption (AES or Advanced Encryption Standard) for sensitive radio transmissions on the ARMER system. To achieve this capability, supplemental funding is necessary to replace and/or upgrade existing ARMER system equipment.

Estimated Metro Region cost: ~\$9 million

Geo-Diverse 9-1-1 Call Handling Equipment (CHE) ESInet Connections

Many Minnesota PSAPs are taking advantage of geo-diverse technology with new CHE platforms that allow for 9-1-1 calls to be delivered to two locations simultaneously. Geo-diverse configurations split the A and B servers typically found at one location, into two separate geo-diverse locations, which allows for additional staff at another location, or PSAP, during extremely busy times or special events to answer 9-1-1 and administrative calls while the main PSAP is still active. It also allows the PSAP to abandon its primary location while the backup location is fully operational and gives the opportunity for a staged evacuation while staff is enroute to the backup location. Additionally, the main PSAP can operate on the connections that exist at its backup location if the main PSAP experiences any technical issues with its connections. To allow for full redundancy and resiliency, each PSAP utilizing geo-diverse CHE should have two Emergency Services Internet (ESInet) connections at each location to ensure the maximum number of 9-1-1 calls can be received at either location at any time, regardless of any problems occurring at the other location. Currently, ECN only pays for two ESInet connections at each PSAP, which is the typical setup for legacy CHE. ECN should reconsider its position and pay for four ESInet connections for PSAPs which implement geo-diverse CHE systems. Having four ESInet connections provides improved resiliency and redundancy for a PSAP's 9-1-1 system and best serves the residents of its jurisdiction.

Estimated Metro Region cost: ~\$12,000 per PSAP per year, or \$216,000 annually in addition to ECN's current costs

Vendor-provided Radio Technical Training

According to SECB standard, system administrators must go through training at least once every two years. To keep current with evolving technology, administrators request to attend training provided by a contracted technical vendor to fulfill this need.

Estimated Metro Region cost: ~\$40,000 per year

CRTF Training and Exercising

The Metro Communications Response Task Force (CRTF) holds quarterly training/exercises for deployable personnel to remain current on local, state, and national standards. These deployable personnel typically are assigned to assist in the field, the command post, EOCs, and PSAPs during planned and emergent events.

Estimated Metro Region cost: ~\$10,000 per year

Staff Recruitment & Retention

Public safety disciplines, including PSAPs and LMR technology departments, struggle to recruit and retain employees. There is a need to establish a program to actively recruit new staff and to retain employees. The Emergency Medical Services Regulatory Board has established a pilot grant to focus on EMS employee sustainability. Similar programs should be instituted for other public safety disciplines, though with this request the focus is on public safety telecommunicators and system technologists. The metro region would like to contract with a vendor to place targeted recruitment ads via radio, flyers, videos, and social media platforms.

Estimated Metro Region cost: ~\$100,000 per year

Ongoing Maintenance for Existing ARMER Infrastructure

Every five years, the State of Minnesota (specifically MnDOT) executes a service contract with Motorola for maintenance and upgrades to the ARMER system. A combination of 9-1-1 fees, state funds, and federal trunk highway funds are used to fund maintenance of state-owned radio infrastructure. Counties and the City of Minneapolis own "local enhancements" which are additional tower sites or channels interconnected with the state-owned sites to provide adequate coverage for local users. These local enhancements are shared with general users of the ARMER system. Local enhancements and backhaul to the regional network are funded by the owning agencies. Since the state-owned and local enhancements form the completed radio network, a funding source to assist in the maintenance of the local enhancement sites is needed.

Estimated Metro Region cost: ~\$500,000

Subscriber Equipment Replacement

The subscriber radios (mobiles and portables) used to communicate on the ARMER statewide system have a finite lifespan. These radios reach end-of-life when firmware, batteries, or replacement parts become unavailable. Continuing to use outdated subscriber equipment results in distorted or incomplete communications. Equipment replacement is typically funded locally with no state or federal dollars associated; having shared funding for these shared resources would be ideal to ensure the quality and consistency of emergency communications.

Estimated Metro Region cost: ~\$11 million

Additional Local Enhancement for Capacity/Coverage Needs

As the population in the region continues to increase and new buildings are constructed, local subsystem owners need to add additional ARMER tower site to increase coverage and capacity to meet higher density population centers.

Estimated Metro Region cost: ~\$50 million

Meeting Agenda: MESB PSAP Roundtable

Date & Time: Tuesday, January 9th, 2024 1000-1200

Location: MSP Fire Station 1
6920 34th Ave S.
Minneapolis, MN 55450

Teams link: https://teams.microsoft.com/l/meetup-join/19%3ameeting_MGJINDUwOGMtNDY1ZC00MzFILTgyYzMtN2FjOTdjOTU0M2Mx%40thread.v2/0?context=%7b%22Tid%22%3a%225d7e2cd6-db7a-47be-bcc5-6bded478bab2%22%2c%22Oid%22%3a%2270ddc314-7943-487b-a554-574d66b7bd15%22%7d

Host contact: Phil Ozmun Phil.Ozmun@mspmack.org
Office 612-794-4328

Committee Chair: Heidi Meyer @ Heidi.meyer@anokacountymn.gov
Office 763-324-4750 Cell 612-418-7283

Agenda Items:

Introductions, virtual: Heidi Meyer Anoka, Katrina Trudeau Bloomington, Dawn Kenyon Hennepin County, Kelly Sandmann Anoka, Lisa Vik EDPD, Leticia Cardenas MPLS, in person: Airport – Phil Ozmun, Lindsay Stambaugh, Tom Groninga, Lauren Peterson Allina – Candy Capra Dakota – Tara Shoemaker, Rachel Keeler U of M – Joe McCollow St. Louis Park – Eric Lammle MESB – Richard “Jake” Jacobson

1. Introductions
2. Additions, changes to the agenda
 - Rachel from Dakota brought up DTF wanting other agencies to dispatch for them if their own agencies are not involved i.e., PD not involved. Some events and agencies can't always appropriately handle it due to staffing. If needed, most can monitor. It was suggested that a team dedicated for this kind of dispatching be created so someone can be dedicated if needed. Making it understood to the officer requesting if it is realistic to have a dedicated dispatcher or not. Managing officers' expectations and necessary needs and discussions and training on the officer's side of things is this something the group would like to discuss further or investigate more. Dakota suggested more input from other agencies who are not currently present. It was asked what the expectations are of this conversation. PSAPs need to be on board with the cross monitoring and who handles the situation. A lot of variables are included with this topic. It was suggested that the agencies and other PDs involved need to be involved. It was determined that it should be brought to the TOC meeting for discussion and decision.
3. Training (new employee and continuing ed.)
 1. Current in-service opportunities
 - Anoka County – Feb - all staff attending 4 hours “Situational Awareness and Survival for Dispatch” presented by Blue Ethos Specialized Training
 - Regional Response/Active Shooter training being offered last week of Feb, late summer & early fall of 2024.

- MNCIT trainings in February, April, and May
 - Majority of centers have not rolled out the Blue Peak training. Most have pushed it out for another year or so.
2. CTO training / Roundtable
 - Anoka is having CTO's do APCO online training which is self-guided. Anoka is currently evaluating NENA's core competencies course to determine if they'll implement that into classroom training.
 - CTO Round Table didn't meet in January due to low turnout. Question was brought up if there's a requirement from the TOC that they have to meet at specific times and if meeting notes are necessary. Jake advised that it does not need to be 'official' and if necessary, the PSAP Round Table can bring forward anything of importance discussed in the CTO meeting for documentation. Discussed using Microsoft Teams rather than Base Camp which would be easier and more realistic with staffing levels across all metro agencies. Agencies are encouraged to send updated lists to Delci at Dakota Co. Heidi will bring it up at TOC for both CTO and Metro PSAP Round Table groups.
 3. General training questions, updates, etc.
 4. Standards
 5. 2023 Metro Salary Study update
 - St Louis Park hasn't settled completely but they switched from hourly wage for CTO, COL, and work alone to a percentage that increases depending on their hourly wage increase.
 6. Events and exercises (plans, meetings, 205's, impact on operations)
 7. PSAP technical updates and info (CAD, radio, phone, and other systems)
 - Minneapolis is updating their CAD queues in the fall.
 - Anoka has a new map program Spatial Command and Control from Intrado but having difficulty with it, due to hardware issues.
 - St Louis Park is live with Axon respond and can log into live active body cams. PSTCs (dispatchers) have communal log in and get notification for every gun draw and taser activation. PSTCs see where units are moving and can see the triggers/alerts. If someone is not responding to status checks etc. this is an additional tool. One important thing to note is that dispatchers can activate a body camera even if it is not already turned on by the operator/office. It does let officers know that the camera has been activated. If stealth mode was selected by the officer, no lights/audible vibration only. The main driver is officer safety and they do not expect PSTCs to normally log in and views cams. Audio recording can be accessed, and CAD comments added. There were questions about the policy surrounding it.
 - U of M went live with FLOCK (along perimeter of Mpls campus).
 8. QA/QI – general updates, questions, etc.
 9. PSAP operational updates and information (management, staffing, schedules, significant changes) – around-the-table updates from each agency
 - MPLS – Hoping to be in new center mid-March.
 - Anoka –4 currently in classroom just started yesterday. Dispatcher on demand still being used but as trainees progress, won't be needed. Going through some organizational changes and looking forward to moving into new building, hopefully this summer. Trying a new approach with training where 3 weeks are in classroom focusing on call taking then 2

weeks of more intense training with live call taking while still in the classroom. This allows for discussion in between calls.

- Dakota – offering part time positions for the first time and have hired back 4 former full-time employees and have 1-2 from other agencies interested.
- Airport - hired another video surveillance specialist.
- St Louis Park has 1 FT opening from November and will work on filling it internally.
- Minneapolis - have started a PT pilot program 6 people currently in that.
- Ramsey - doing ½ in class ½ on floor for training.
- Jake / MESB – RFP's are out for Next Gen 911 infrastructure project, allows for collaboration with more technology, ALI mapping RFP (rapid SOS/DEPLOY), state wide interoperability partnership RFP, grant \$75,000 for resiliency training given (not necessarily Blue Peak*)

10. Meeting calendar 2024

January 9th, 2024 – MSP

April 9th, 2024 – Dakota, possibly

July 9th, 2024 – Minneapolis ECC

October 8th, 2024 – Anoka County

DRAFT

Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
9-1-1 Data/GIS Report
February 15, 2024 Meeting

1. **Importance of GIS for 9-1-1:** PSAP managers are strongly encouraged to assist their GIS counterparts in communicating to key decisionmakers and county leadership the **vital role GIS has to their current and future PSAP operations**. Geospatial datasets provide foundational data for PSAP CAD/mapping systems and NG9-1-1 core services, as well as support many non-public safety uses important to counties and cities.
2. **Regional GIS Dataset Aggregation and Validation:** The region has a **monthly cadence** for NG9-1-1 validations and submission to statewide datasets. The next full regional NG9-1-1 data validation run is planned for **February 9, 2023**.
3. **Regional Data QA/QC:** MESB continues to **analyze the region’s NG9-1-1 data errors** identified through MESB’s internal validation tools, GeoComm’s Data Hub (GDH), and 1Spatial’s platform. MESB also validates “live” 9-1-1 call locations against the regional GIS to identify missing or inaccurate GIS data. When needed, MESB reaches out to county GIS contacts to make recommended data remediations. If it is determined that MSAG and/or ALI updates are needed MESB will process them on behalf of its PSAPs.
4. **Metro Regional GIS-derived MSAG transition:**
 - a. All MESB PSAPs have now made the **initial transition to a GIS-derived MSAG**. As part of the ongoing GIS MSAG maintenance plan, **MSAG “refreshes”** are being scheduled. For some MSAGs, this may involve upgrading to a GIS MSAG style of one MSAG entry for each side of each road centerline segment. Additional methods are also used for GIS MSAG maintenance between full “refreshes.”
 - b. **Refresh complete:** Dakota County, Ramsey County, Bloomington PD, Anoka County, Chisago County, Edina PD, Eden Prairie PD, Isanti County
 - c. **Refresh pending at Intrado:** Sherburne County
 - d. **Refresh anticipated in 2024:** MAC Airport, Fort Snelling, St Louis Park PD Hennepin Sheriff, Carver County, MECC, Scott County, U of M PD, Washington County
5. **Wireless Location Based Routing (LBR):** The FCC has ruled that nationwide wireless carriers need to implement LBR in 6 months, others in 24 months. LBR uses device location and the region’s PSAP boundary polygons to route wireless calls. Cell sector routing is used as a fallback when LBR is not feasible. The 3 major wireless carriers have already implemented LBR in the MESB region (T-Mobile 2021, AT&T 2022, Verizon 2023.) Quarterly, MESB distributes updated PSAP boundaries to wireless carriers, MPCs, VPCs, TCCs, and other interested parties.
6. **Verizon/Comtech Wireless ALI Display Updates:**
 - a. **New ALI Customer Name Content:** Comtech has implemented the software change outlined in the *January 911 TOC Data Report* that will **identify “VOWIFI CALLING” or “Non-Mobile Device”** in the *Customer Name field* of Verizon ALI displays when applicable. Knowing the carrier classifies a call as one processed over WiFi, or if the device used to make a call was intended to be stationary, may aid as an **additional factor when PSTs interact with callers to determine their location**. Also, Verizon/Comtech say that **rebidding location** is a recommended practice as it may improve the caller’s location coordinates.
 - b. **Correction of ALI displays for Verizon/Comtech calls routed via LBR:** A Comtech software fix has successfully corrected the formatting issue with wireless ALI displays on Verizon LBR routed calls.

7. **Verizon Wireless Misrouted Calls:** MESB PSAPs have not made MESB aware of any recent Verizon out-of-state misrouted calls. PSAPs should continue to notify MESB (Jake Jacobson and Marcia Broman) of any tickets opened with Comtech on Verizon out-of-state misrouted calls.
 - a. The most expedient method to report issues with wireless calls, such as misroutes, is to **open a ticket with the applicable wireless carrier** (not through Lumen repair or 911NET).
 - b. **Verizon out-of-state misrouted calls (or any other Verizon wireless issues) should be reported to the Comtech NOC 800-959-3749 or noc@comtech.com.**
 - i. **Email reporting** is recommended for tracking purposes.
 - ii. Comtech states call reports “must be **within the past 7 days, preferred within 3-5 days** for most accurate traces.”
 - iii. Providing a **screenshot** of the call, along with a **CDR** (if possible), and specifics about where the caller’s stated location are all very helpful to the investigation.
 - c. MESB will monitor the ticket and trends across the region, ask additional questions of Comtech/Verizon (as needed), and share information about the call with the FCC inquiry that is currently underway.

ONGOING ACTIVITIES

8. **GIS supporting RapidDeploy Radius ALI Mapping:** MESB continues regular monthly “refreshes” of the metro GIS datasets used for ESRI map and geocoding services supporting RapidDeploy Radius mapping.
9. **Integration with State NG9-1-1 GIS Activities:** All MESB regional NG9-1-1 required datasets are included in the statewide enterprise database. These datasets include: the metro regional supplier boundary, road centerlines, address points, and Emergency Services Zones (resulting in PSAP, law enforcement, fire, and EMS boundaries.)
10. **SECB NG9-1-1 GIS Workgroup:** This **SECB workgroup focused on NG9-1-1 GIS topics** is now meeting monthly (virtually 2nd Thursday of each month 9:00-10:00 am.) MESB is participating on behalf of the region. Metro county GIS data producers are also encouraged to participate as their availability allows.
11. **Regional GIS Data Aggregation:**
 - a. **Road Centerline and Address Points:** The MetroGIS/Met Council processes regional road centerline and address point dataset updates nightly to the MN Geospatial Commons website. Each metro county’s most recent centerline and address point data that has been uploaded to the portal and passed validations is included in the regional datasets. The regional road centerline and address point datasets comply with the current MN Geospatial Advisory Council (GAC) data standards.
 - b. **Boundary Polygons:** MESB maintains the regional PSAP, ESZ, MSAG community, law, fire, and EMS boundary polygon layers in coordination with the PSAPs. These datasets are updated as boundaries change or at least quarterly. Mobile Positioning Center, Text Control Center, and VoIP Positioning Center vendors are directed to the MN Geospatial Commons for downloads of metro’s PSAP boundary polygons.
12. **Regional Data Viewer:** PSAPs are encouraged to use the [regional 9-1-1 dataviewer](https://www.metrogis.org/projects/9-1-1-Data-Viewer.aspx) developed by MetroGIS/Met Council to view the geospatial data county GIS departments consider valid and current for regional 9-1-1 use. This is the authoritative source of NG9-1-1 GIS data for the 10-county MESB region. (<https://www.metrogis.org/projects/9-1-1-Data-Viewer.aspx>.)
13. **Wireless Cell Sector/Routing Data:** MESB continues to process wireless cell sector routing updates for all four wireless carriers on behalf of the metro PSAPs. Should PSAPs want the routing for a specific cell sector or 9-1-1 call reviewed, just email mesbgis@mn-mesb.org and MESB staff will investigate.

**Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
9-1-1 Network Report
February 15, 2024 Meeting**

Completed: Roll out for the Lumen Ticketing system training and access provisioning
Lumen Training completed via Teams

- Opinion: Use of the online ticketing system is best suited for
 - Tracking ticket status.
 - When you are unable to get the NOC via phone, you can create a ticket online.
 - Uploading files/data that can help in resolution.

Meeting Jan 10. – ECN 911 Interoperability and Data Sharing Initiative

- Vision/Scoping session, well represented by MESB PSAPs.
- Next meeting expected in February.

Continued: ECN Mapped ALI RFP evaluation

- Think RapidDeploy/Rapid SOS and other vendors in that space.
- Darlene Pankonie is serving as a PSAP representative.

Monitoring: Reviewing for potential – interoperability with Wisconsin PSAPs – Pierce, Butler counties

- Wisconsin PSAPs joining a WI ESInet that would have capabilities of transferring voice 9-1-1 calls to MN PSAPs.
- ECN and MESB giving Lumen green light to pursue, expect follow up meetings when details forthcoming.

2022/2023 Call Stats (MESB area includes State Patrol Metro)

2023

PSAP Location	2023 Total Calls
MESB	2134433
N/A	646
Outstate	1074199
Grand Total	3209278

2022

PSAP Location	2022 Total Calls
MESB	2028459
N/A	210
Outstate	999435
Grand Total	3028104

	2022	2023	% Increase
MESB	2,028,459	2,134,433	5%
Outstate	999,435	1,074,199	7%

Usage of RapidDeploy January 2024 using data from Jenni Wade of RapidDeploy

Count is made for each person's use of the application each week, whether 100 times or once, it's one count, per person, per week.


PSAP	Jan '24 Total
Anoka County	167
Bloomington PD	40
Carver County	40
Chisago County	37
Dakota County	144
Eden Prairie PD	44
Isanti County	2
Ramsey County	179
Sherburne County	32
U of M PD	21
Washington County	112
Total	818

State Totals

	Jan '24 Total
MESB	818
Metro State Patrol	89
Outstate	1335
Total	2242

- Not known – usage of other 3rd party tools e.g. RapidSOS, GoodSam, Prepared Live.
- Evolving(?) – A Metro PSAP received Spanish text on their CHE. Use of RapidDeploy text would result in creating a separate text session with the 9-1-1 texter. Desirable to have integration of text translator with CHE.

In Draft Phase, awaiting final SECB approval – TDOS Communication.



MINNESOTA DEPARTMENT OF PUBLIC SAFETY
EMERGENCY COMMUNICATION NETWORKS

Telephony Denial of Service attacks on Public Safety Answering Points

The Minnesota Department of Public Safety Emergency Communication Networks (ECN) division is warning 911 stakeholders about Telephony Denial of Service (TDoS) attacks on Public Safety Answering Points (PSAPs).

A TDoS attack differs from a nuisance or annoyance because it is a deliberate attempt by an adversary to disrupt PSAP operations by overwhelming the 911 or 10-digit administrative telephone systems. Characteristics of TDoS attacks include:

- Continuously calling 911 or the 10-digit administrative line of a specific PSAP, sometimes for hours at a time. TDoS attacks can be automated to overwhelm a PSAP with multiple calls occurring simultaneously or in rapid succession.
- Calling multiple PSAPs, often in different states, simultaneously and conferencing these PSAPs together.
- The caller's use of offensive, threatening or alarming language.

Ingress project issue

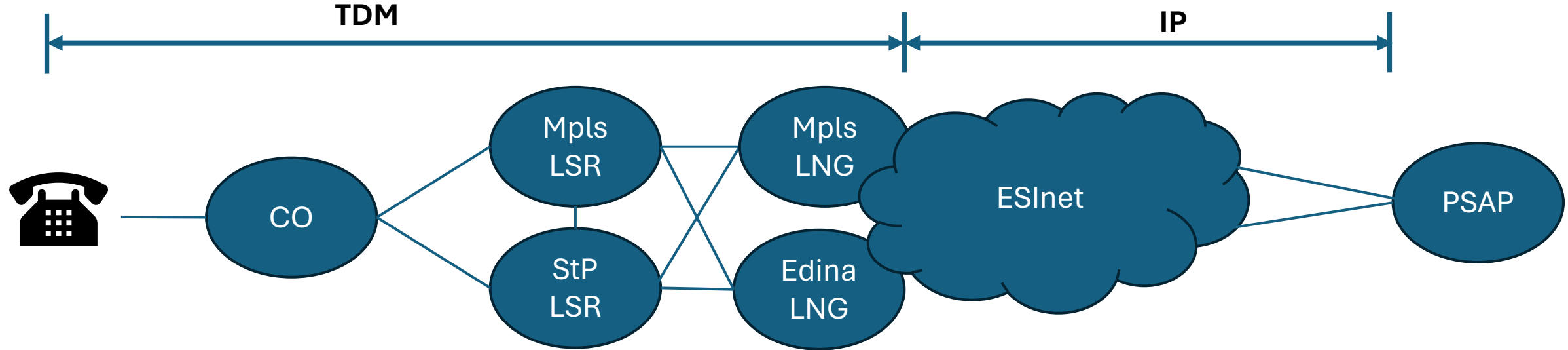
Ingress migration to Sinch has been completed for Wireless and VoIP carriers; work is underway to migrate wireline Central Offices, which is the final leg of transitioning all phone providers to the Sinch Ingress system.

For the metro area, Lumen/CenturyLink Central Offices have begun the migration starting with central offices located in Anoka County. **In this initial wireline migration, somehow in the conversion of the SS7 data to the IP network, the privacy setting is obscuring the phone number.** As a result, the call is default routed. PSAPs receive 000-911-0000 as the calling phone number and no location for the caller.

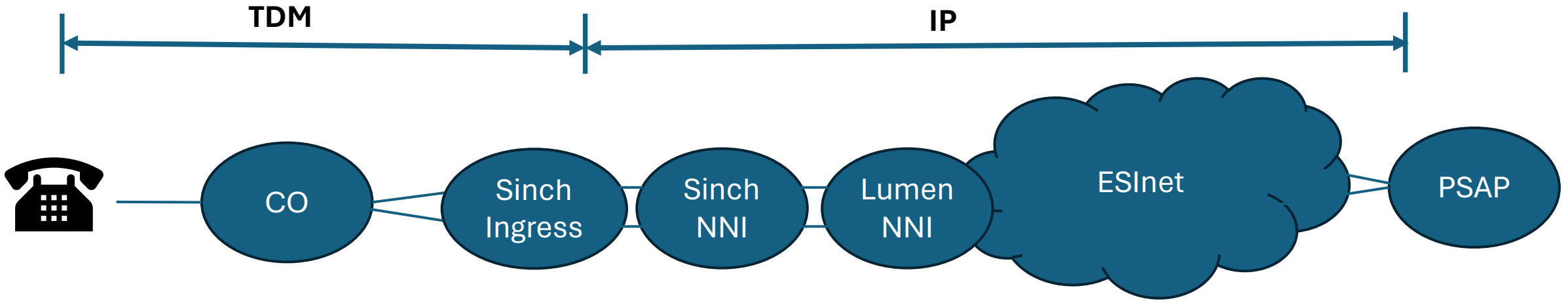
A “vendor meet” (Sinch, Lumen, Intrado) was conducted February 7, in which test cases were created using the same phone number from a Central Office in Blaine. One test case used the privacy setting (think *67) with the other test case having it removed – simulating a typical wireline phone call. Initial analysis was inconclusive for root cause determination. Work continues with a planned vendor meet at the time of writing this report.

See the following diagrams on the next two pages for a general overview of the wireline ingress undergoing the migration to Sinch.

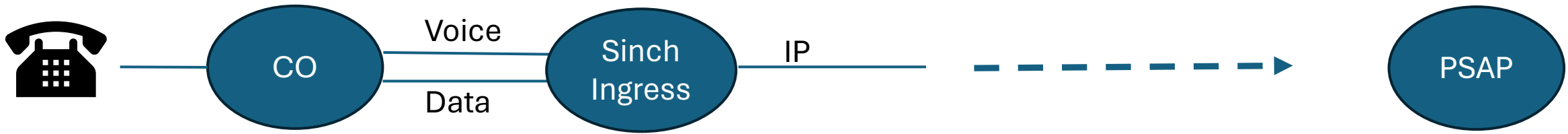
Current World of Wireline Call reaching a Metro PSAP



Sinch Ingress World of Wireline Call reaching a Metro PSAP



CO – Wireline Central Office
LSR -- Legacy Selective Router
LNG – Legacy Network Gateway
NNI – Network-to-Network Interface
TDM -Time Division Multiplexing. It's the technology behind traditional phone service.



The wireline world uses SS7 (Signaling System 7) in which voice travels down one channel while the data (e.g. phone #) about the phone call travels down another.

Sinch converts these separate voice and data channels to one SIP session. In the IP world, voice is data, it's all data.

Stuff
Phone Number
Housekeeping stuff
Other stuff
Privacy Setting
Other stuff
Etc.

A simplification, but in the SS7 data sent is the ANI and other items like if a privacy setting is enabled which the phone # will present itself as “Anonymous”

The issue: Somehow in the conversion of the SS7 data, the privacy setting is obscuring the phone number As a result, the call is default routed. The PSAP receives only 000-911-0000 as the calling phone number and no location for the caller. This is a no-no in the world of 9-1-1. PSAPs should always have the ability of seeing the phone number. Privacy rights are surrendered when calling 9-1-1.