MONTHLY UPDATE

DIRECT FROM DANA

While it sometimes seems like forever, (and then again) like only yesterday, we have been teleworking for 365 days! Who would have thought things could change so quickly or that staff and stakeholders could adapt so quickly? While the virtual meetings pale in comparison to in-person networking, Minnesota public safety professionals have made the most of the change and have done so with tremendous success. COVID protocols introduced new and challenging levels of efforts we collectively embraced. Civil unrest further rocked our world. While these truly have been unprecedented times, we continue to work together to achieve success in spite of the odds!

The latest information from Minnesota Management and Budget is that state employees will continue to telework through the end of June 2021, and that a phased return to work will occur between July and September.

The Emergency Communication Networks (ECN) division has been fortunate to hire and conduct successful remote/virtual training for four new team members. Aleta Nimlos is our latest extremely talented and bright new hire. She will be supporting the Statewide Emergency Communication Board (SECB) and its eight committees with administrative support. Welcome aboard Aleta!

Aleta Nimlos is a highly qualified Executive Assistant and earned her master-of-arts degree in Spanish and Latin American History from the University of Minnesota-Twin Cities. Her research work on the 16th century advent of smallpox to the Americas has been referenced in a number of scholarly works on the history of Latin America.

Before joining the State of Minnesota ECN in Feb. 2021, Aleta worked for a variety of non-profit and for-profit organizations, including: Health Innovations of America, Children's HeartLink, Big Brothers Big Sisters of the Greater Twin Cities, and Comunidades Latinas Unidas En Servicio (CLUES).

Aleta's varied background in social services, education, and business has provided the perfect foundation for her current position at ECN of Executive Assistant/OAS, Sr. where she is tasked with serving the SECB and its affiliated committees.

Passionate about service to others, Aleta's core values include life-long learning, healthy interpersonal relationships, and integrity of character.

Aleta can be reached at ECN by telephone at (651) 201-7547 or by email at Aleta.Nimlos@state.mn.us.

March 2021

Stay connected with the Emergency Communication Networks Division and the Statewide Emergency Communications Board

Visit our website to sign up or manage communications you receive.

Cont. from Direct from Dana

Learning that our annual Public Safety Communications Conference would be canceled for the second year in a row, ECN staff went to work with last year's conference committee to formalize meaningful content. In lieu of the conference, we will be hosting educational/informational webinars intended to provide stakeholders with an opportunity to learn more about the governance, technology, and operational aspects of Minnesota's emergency communication networks four core program systems (911, ARMER, Wireless Broadband, and IPAWS). Presentations are held on the second and fourth Tuesdays of each month from 9 a.m. to 11 a.m. They are recorded and available on the ECN website Training page for later viewing. Click on the hyperlinks here for the [February 23 Overview of Public Safety Communications Technology in Minnesota](#) and the [March 9 Introduction to SECB Governance](#) presentations.

The next webinar on March 23 will feature an Overview of SECB Standards.

9-1-1

Through Minnesota 403, the Department of Public Safety Commissioner is responsible for the maintenance of the 911 network. The 911 network's primary function is to take the location of a 911 caller, identify which PSAP the call should be routed to, and connect the caller to the call taker or dispatcher.

The 911 system turned 53 this year, and is operating with temporary solutions to routing workflows in order to accommodate cellular devices. An upgrade to the 911 network plays a prominent role in the current SECB strategic plan and is currently being implemented by ECN. A high-level overview of this transition is detailed below with a glossary of terms and corresponding acronyms on the back.

Legacy 911
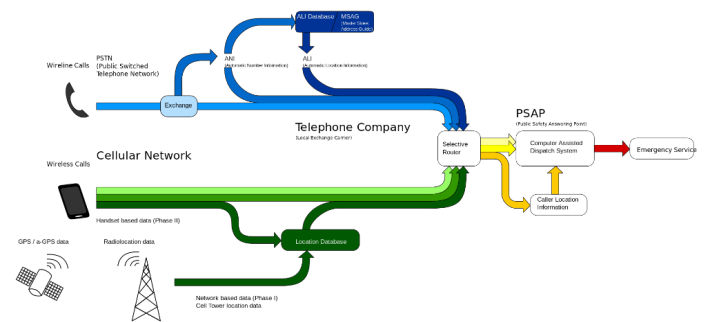
The legacy 911 network routing workflow was engineered at a time when the only means of calling someone was on a wired landline. The location of 911 callers was fixed at a home or office and tied to one device. The legacy system currently uses tabular location databases and can successfully route wireline, VOIP and wireless callers.

NG911

With ongoing advances in technology, it is essential we recognize and address the existing, aging 911 infrastructure and replace it with modern next generation 911 architecture. A new 911 architecture, known as NENA's i3 model, was published 10 years ago. This new architecture relies upon Internet Protocol (IP) technology to transmit the calls but will also allow for the transmissions of texts and ultimately photos and video to be sent to the dispatch center. This network overhaul is comprised of three parts: the ingress network, the next generation core services (NGCS) and the egress network.

Ingress Network: The purpose of the ingress network is to prepare 911 calls for location identification. The components in this network connect originating service providers (wireline, VOIP or wireless), and if needed, convert the call into an IP format. The location of the caller is then ready for transmission to the NGCS.

NGCS: The NGCS play two functions. First, to identify the public safety answering point (PSAP) who is the primary call center for this location (either via geo-verification, or policy based routing). Secondly, to validate that a new wireline or VOIP (voice over internet protocol) service location is a valid 911 address. Gone are the tabular location databases found in the legacy 911 call routing networks (Master Street Address Guide and Automatic Location Identification). This functionality is now replaced

by highly-accurate, locally sourced geographic information systems (GIS) data.

Egress: Once the NGCS has provided the recommendation on which PSAP the call is routed to, the egress network takes on the transporting of the caller to that dispatch center. Some call this the "last mile" network or the ESInet.

Project Status
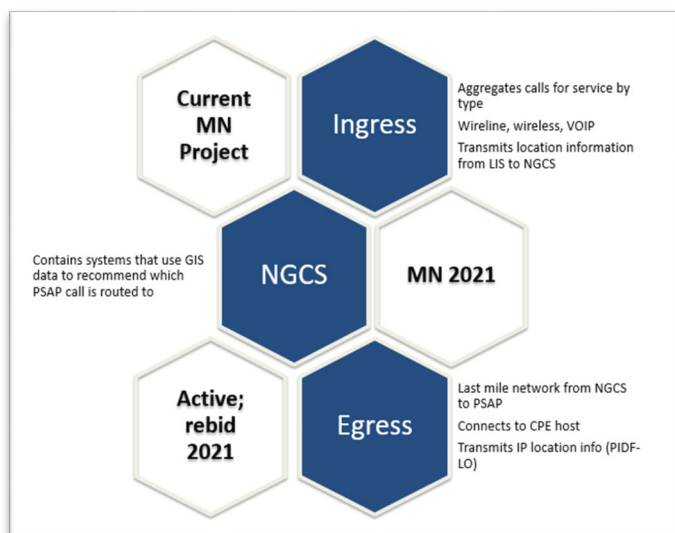
In 2015, ECN and MESB contracted NG911 services with Lumen (then known as CenturyLink) to address beginning the network transition. This contract enabled the state to initiate a statewide Text-to-911 program and begin transmitting calls in an IP format to the PSAP. In 2020, ECN and MESB contracted the Ingress project to Inteliquent. This project's current state is working with the 100+ originating service providers (wireline, wireless and VOIP) to aggregate its networks at designated points of integration the provider manages. From there, calls will be prepared to be transmitted to the NGCS where PSAP identification will occur. This year, ECN and MESB will solicit bids for the NGCS and the egress network.

The spirit of NG911 i3 architecture is to create a competitive market that encourages multiple solution and service providers who contract for these network components. This is a change in how 911 operates as a business but also presents some new challenges. Traditionally, 911 services have been provided by one vendor. This includes the monitoring of the network for service disruptions. In addition to ingress, NGCS, and

egress, Minnesota plans to implement end-to-end network monitoring to include observing all three components of the NG911 call routing network. This approach will provide stakeholders at the local, regional and state levels a single point of contact to report an issue or to be alerted should an issue occur in the 911 call flow to the PSAP.

GIS

This following is a preview of information that will be included in the upcoming release of the GIS communication website. Listed below are some of the statewide statistics available on the NG911 GIS Validation Status Dashboard map:

- Pre-Processing: PSAPs are more than 80 percent through this step. The purpose of pre-processing is to verify that required fields have been populated, domains are adhered to, and parsing requirements are met
- Community Name Validation: PSAPs are more than 60 percent through normalizing community names across the datasets: master street address guide, city/township/unorganized, and GIS data
- Emergency Service Number (ESN) Validation: PSAPs are more than 47 percent through normalizing ESNs across the datasets: emergency service numbers, master street address guide, road center lines, and address points
- Street Name Validation: PSAPs are almost 40 percent through normalizing street name across the datasets: master street address guide and road center line

The dashboard will include the ability to highlight a specific PSAP to see the progress on each of the validation steps.

ECN is working to finalize the initial content and develop a scheduled release of this communication website. The page will detail NG9-1-1 program information and GIS data development status, which will be helpful for the public and the stakeholder community.

Thank you to all the county, tribal and city data contributors! Your data is making a difference.

You can find more information about the GIS project on ECN's NG9-1-1 GIS Project website.

Norm Anderson (651-201-2483 or 651-201-7559) is the GIS Project Manager for ECN and MnGeo. Akiko Nakamura (651-201-7558) from our office is also working on the project, so please feel free to reach out to either one of them with questions related to the GIS project.

ARMER

The Federal Communications Commission (FCC) has announced the establishment of the Ending 911 Fee Diversion Now Strike Force to closely examine 911 Fee Diversion, which has become an increasingly growing topic of discussion since 2008. Nominations to the Strike Force are being accepted by the FCC through March 19. The Strike Force is expected to:

- Determine the effectiveness of any federal laws, including regulations, policies and practices or budgetary or jurisdictional constraints regarding how the federal government can most expeditiously end 911 fee diversion;
- Consider whether criminal penalties would further prevent 911 fee diversion; and
- Determine the impacts of fee diversion

The Strike Force is expected to both publish on the FCC website (and submit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate) the following:

- Recommendations regarding how to quickly end 911 fee diversion, including actions that can be taken by federal departments and agencies and appropriate changes to law or regulations; and
- A description of what progress, if any, relevant federal departments and agencies have made in implementing recommendations.

The FCC is being asked to:

- Adopt rules that constitute what is and what is not the kind of diversion that has concerned both Congress and the commission; and

- Establish a declaratory ruling process for providing guidance to states on fee diversion; and
- Establish a process for states to petition for previously unacceptable expenditures to be allowable/acceptable with appropriate justification.

Given ECNs operating budget is exclusively funded through the 911 Special Revenue Fund, this is an area that requires a significant focus between now and Sept. 23 when the 911 Strike Force must provide their findings.

Wireless Broadband - FirstNet

Workgroup Update

The workgroup and Wireless Broadband and Applications Committee (WBB&A Committee) has approved publication of two of the three best practice guides; basic applications, and push-to-talk. The situational awareness guide should be available soon. These guides are available online on the Wireless Broadband Reports webpage. The next topic for the workgroup to discuss is the coverage tool. Members are working on a work plan detailing all the needs of the project. At the January meeting, discussion focused on roll out of the coverage tool, project goals and priorities. Certainly, there is much to learn about coverage; and the workgroup agreed that the primary goal was for local agencies to discover what coverage exists in their jurisdiction. New technology and new infrastructure has all affected coverage, and this tool will help us understand it better.

4.9 GHZ FCC Report & Order

To follow up on previous reports in this newsletter concerning 4.9 GHZ, the new administration has put on hold any action concerning 4.9 GHZ transferring to states. The Acting Chair Rosenworcel had previously filed a decent to the 4.9 GHZ Report & Order.

IPAWS

FEMA has distributed the fourth quarter 2020 required testing results. Considering the holiday season, COVID-19, and other distractions, results are favorable. Outreach is underway to offer assistance to those counties identified in black or red below, who fell below acceptable compliance.

Alerting Authorities Performing Proficiency Demonstrations – 4th Quarter 2020
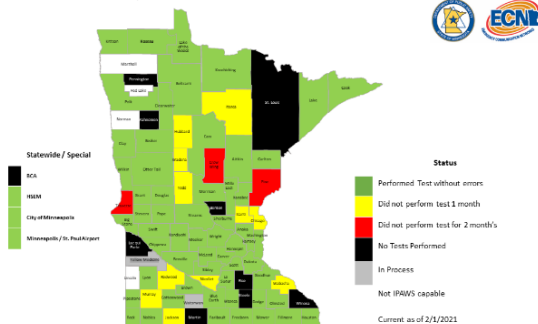
New: IPAWS Lab 24/7 Technical Services Support Desk (TSSD)

The Integrated Public Alert and Warning Systems (IPAWS) Program Management Office (PMO) has announced the availability of the IPAWS Lab TSSD 24 hours a day, seven days per week, including holidays.

How does it work?

The IPAWS PMO has secured a new toll-free number for the lab (1-84-IPAWSLAB or 1-844-729-7522). You can call this number during both business hours and after-hours. It will always be answered by the IPAWS Lab answering service and routed to the appropriate lab staff.

What issues should I call for?

Alerting authorities may encounter various issues and/or concerns when using IPAWS. The IPAWS Lab 24/7 TSSD will be available to assist you with:

- Technical failures issuing a live alert.
- Troubleshooting errant alerts and explanation of error codes.
- Proficiency demonstrations and practice alerts.
- Alerting best practices.
- Webinars (during business hours) to support training initiatives.

- Exercise participation.
- And other IPAWS-related initiatives.

What can I expect when the service receives my call?

The answering service is a contracted vendor who will receive your call. Please be prepared to provide the answering service with the following information:

- Your first and last name
- Telephone number
- Brief description of issue

The operator will transfer your call to IPAWS Lab 24/7 TSSD personnel for assistance. On-call lab personnel will determine the level of support to meet your needs and act accordingly.

Does this service replace my vendor helpdesk?

No. The IPAWS Lab 24/7 TSSD is in place to assist Alerting Authorities with after-hours IPAWS issues, not vendor-specific software inquiries and/or questions. Please refer to your vendor for product inquiries.

What is the new toll-free phone number again?

Toll-Free: 1-84-IPAWSLAB or 1-844-729-7522

Interoperability

LTE to LMR

FirstNet has announced several new features on the network that differentiate it from commercial networks. In the interest of interoperability, Long Term Evolution (LTE) to Land Mobile Radio (LMR) Kits are available to simplify the connection between ARMER and FirstNet. The picture above shows a Vocality Gateway, which is a part of the fully featured bundle. Each bundle is FirstNet ready and certified. Once the connection is established, the talkgroups can be managed through the

administrative portal; [FirstNet Central](). FirstNet Representatives can help with additional details, cost, and installation.

The user community is beginning to share some use cases where these gateways are beneficial:

- Volunteer firefighters who don't have access to ARMER radios.
- Undercover detectives that are looking to blend in.
- Keeping schools, bus drivers, public works, and other secondary responders connected to public safety when needed.
- Leadership that wants to be connected when outside the state, since FirstNet is a national solution.

These other new features announced by FirstNet are exclusive to Band Class 14. They include high-powered user equipment (HPUE) from Airgain, and Assured Wireless, and z-axis (height above terrain) location features, which are currently available in Response by Intrepid Response.

Accounting/Finance Update

Last month, ECN finance staff finalized preparations for a fee change. In addition to 911 fees, ECN receives and processes telephone carrier remittances for two other state entities. TAM (Telecommunications Access Minnesota) fees are collected on behalf of the Department of Commerce and TAP (Telephone Assistance Plan) fees are collected on behalf of the Public Utilities Commission (PUC). In coordination with partners at Commerce and the PUC, ECN's Purchasing and Contracts Coordinator, Claire Thomas, has been leading a redesign of the Minnesota Telephone Remittance Fee Forms. The new forms and updates to ECN's fee form webpage will be rolled ahead of an April 1 change to the TAP fee.

EO 20-34 Ends

In December 2020, the Governor issued Executive Order (EO) 20-106 rescinding EO 20-34, which had directed the Minnesota Department of Health (MDH) to disclose limited health data to first responders via DPS. As indicated in EO 20-106, it was determined that the cost of this data-sharing program was beginning to outweigh its benefits. As there was no further action from the Legislature to continue the program, it ended on Jan. 31, at which time ECN, the Minnesota Department of Health, and MnGeo staff coordinated a successful wind-down to this nearly ten month long data sharing initiative. Though data sharing has ended, PSAPs may still use the screening process to ask about COVID-19 exposure so that first responders can take necessary precautions. Many thanks to the PSAPs who participated in the data sharing process under EO 20-34 and provided valuable feedback along the way.