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ALMR Help Desk

In Anchorage: (907) 334-2567

Toll Free within Alaska (outside of Anchorage): 888-334-2567

E-mail: almr-helpdesk @beringstraits.com

Follow us on Twitter: @ALMR_SOA

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2024 APCO and MTUG Conferences

The Association of Public Safety Communications Officials (APCO) and the Motorola Trunked Users Group (MTUG) conferences were once again held back to back in the same week. Individuals from the ALMR Operations Management Office and the Alaska Public Safety Communication Services (APSCS) attended the week-long seminar and training sessions.

The week started with the Genesis User Forum. The ALMR Help Desk uses their product, GenWatch, to monitor the system, collect call data, and to track the subscriber units on the system. They discussed the new software coming out at the end of the year and the new reports which can be run on the system for optimal performance and system tracking.

We registered for several training sessions and looked for items that would benefit the ALMR members and dispatch centers.

The San Bernardino County Sheriff's Department dispatch fell victim to a ransomware attack in April 2023. Their dispatch managers gave a presentation on how this impacted their computer systems, including CAD, networking, and connections to law enforcement databases. A copy of the presentation slides were sent to multiple dispatch centers across Alaska to help them better prepare for such incidents.

With the recent push for the installations of bi-directional amplifiers (BDAs), I attended a seminar hosted by the Puget Sound Emergency Radio Network manager. He gave an in-depth presentation on how they have begun to document BDA systems in their response area. When they started the process, they estimated only 400 BDAs, but when they were finished they discovered over 800 units in their area. This provided the ALMR team with excellent information on how to track and manage BDA systems and the pitfalls of not maintaining operational oversite.

When the exhibitor floor opened, we spent many hours talking with vendors and discussing how their products might work in Alaska. These included tower lights, shelters, BDA systems, dispatch systems, portable and mobile radios, cybersecurity, and antennas.

These conversations generated two companies setting up test dates to have their radios approved for ALMR and one BDA manufacturer giving a presentation at the ALMR office.

MTUG is an organization that is comprised of agencies which use Motorola products and was created to have open dialogue between the customers and manufacturer.

In preparation of receiving FedRamp approval for APX Next radio systems, we attended breakout sessions on the APX N70 XE, push-to-talk over LTE VoC, Critical Connect, AES256 encryption, and ASTRO Next. It was great too talk with other agencies who are already using these products on their systems, and how they are being managed and utilized.

The final two days were filled with meetings with Motorola representatives, MTUG members, and attending sessions.

Some of the take aways from the sessions were which products will continue to be supported such as the NICE and Varint loggers, the KVL5000 units which meet the federal information process standards, and the N70 VHF radios will be shipping soon.

The final session focused mainly on what products are no longer supported or are being phased out and agencies voicing their complaints. This is important information for the ALMR team, so when we talk to our members about radios we can let them know which subscriber units will have a longer support time.

(Article prepared by Mr. Paul Fussey, ALMR Operations Manager)

October is Cybersecurity Awareness Month

Since 2004, the President of the United States and Congress have declared the month of October to be Cybersecurity Awareness Month, a dedicated month for the public and private sectors to work together to raise awareness about the importance of cybersecurity.

Over the years, it has grown into a collaborative effort between government and industry to enhance cybersecurity awareness, encourage actions by the public to reduce online risk, and generate discussion on cyber threats on a national and global scale.

The National Cybersecurity Alliance and the Cybersecurity and Infrastructure Security Agency (CISA) released their guide for Cybersecurity Awareness Month. We are increasingly connected through digital tools and more of our sensitive information is online. This convenience comes with risks. Each of us has a part to play in keeping ourselves and others safe. It is easy to do and takes less time than you think.

Staysafeonline.org is the education arm of the National Cybersecurity alliance, and they do a great job of providing vendor-agnostic support to the public and private sectors. This year focuses on four ways to stay safe online: use strong passwords and a password manager, turn on multifactor authentication, recognize and report phishing, and update your software.

The Multi-State information Sharing and Analysis Center (MS-ISAC) is the focal point for state and local governments to get the word out on Cyber Security Awareness Month. Their website offers many articles, suggestions, and toolkits to protect your organization from cyber threats.

Radio system managers, dispatch center personnel, computer technicians, and security managers must remain vigilant for any sign of cyber attacks or phishing scams.

(Article prepared by Mr. Paul Fussey, ALMR Operations Manager, with excerpts from *Secure our world,* September 1, 2024, by Dan Lohrmann and the CISA.gov website.)

ALMR Training Section

The ALMR website is the definitive source for information related to the ALMR system, policies and procedures, and other membership materials. As part of the duties of the ALMR Operations Management Office (OMO), training content is provided for training topics relevant to all member agencies. Recently, the training section of the ALMR website has been reorganized to allow members to easily access training resources.

Each month, the OMO publishes a new training video. These short videos are typically four to ten minutes and are designed to provide information on one specific topic. The new training section provides the listing of training topics on the front page, divided by category. This allows members to find a particular video and navigate to it quickly.

Administrative training reflects administrative aspects of the ALMR system such as policies and procedures, while the system category is the place to explore technical aspects of the ALMR system. Information on the usage of individual radios is found in the subscriber unit section, and interoperability focuses on one of the core aspects of the system – being able to communicate with others on a normal basis and during an emergency or disaster situations.

Another new feature of our website training section is video transcripts. If available, transcripts are located underneath the video date and contain the full video contents. This allows easier searching through the ALMR website, or the ability to search within each transcript to find a specific piece of information which is much easier than having to rewatch the video clip.

The OMO is continuously looking for new training ideas and suggestions. On the ALMR website, under the training section, is a form to request training. Please fill this out if you have ideas or suggestions for future videos or other training topics.

(Article prepared by Mr. Dan Nelson, ALMR Training Coordinator.

Artificial Intelligence and LMR Systems

As stated in President Biden's Executive Order 14110, which was signed on October 20, 2023, "AI must be safe and secure," and the Cybersecurity and Infrastructure Security Agency (CISA) will be at the forefront addressing and managing risks by implementing a roadmap through five lines of effort.

Will AI impact Land Mobile Radio (LMR) systems? Some say AI will make radio communications smarter and lead to enhanced signal processing, improved clarity and noise reduction, and more reliable communication. However, there is the possibility of Generative AI, which refers to deep-learning models that can take raw data and "learn" to generate high-quality text, images, and other content based on the data they are trained on, which may be used by malicious actors to target the security and integrity of systems. For this possibility and others, ALMR conducts constant and quarterly security upgrades.

(Article by Ms. Mary Burnham with information gathered from the CISA.gov website.)

FCC Land Mobile Radio Licensing Activity

Private land mobile radio (LMR) systems are used by companies, local governments, and other organizations to meet a wide range of communication requirements, including coordination of people and materials, important safety and security needs, and quick response in times of emergency.

LMR is important because it is a communication method for those who need instant responses from their team. LMR systems are designed to provide quick and secure transmissions in a broad spectrum of environments. Furthermore, LMR systems have received a number of upgrades, making their current usage more reliable and interoperable for integration into other systems.

These systems, which often share frequencies with other private users, make possible many day-to-day activities that people across the United States have come to rely on, whether directly or indirectly. Public safety agencies, utilities, railroads, manufacturers, and a wide variety of other businesses - from delivery companies to landscapers to building maintenance firms - rely on their business radio systems every day.

The services included in Private Land Mobile Radio are public safety, industrial/business, private land mobile paging, and radiolocation. Private land mobile radio service licensees in the 150-174 MHz and 421-512 MHz bands are subject to the Federal Communication Commission (FCC) January 1, 2013 deadline to migrate to narrowband (12.5 kHz or narrower) technology.

Applications requiring frequency coordination in accordance with FCC Part 90, must first be submitted to the proper frequency coordination committee, which will subsequently forward them to the FCC electronically.

Applications and notifications of certain radio services are required to file electronically within Part 90 land mobile radio service. Individuals or entities desiring to operate on frequencies listed in the Industrial/Business Pool are required to obtain a radio station license for these frequencies.

Public safety land mobile radio licensing activity is tracking near normal levels for recent years, but business-industrial LMR licensing is on pace to reach its highest level in five years, according to figures from the FCC's online Universal Licensing System (ULS) database.

In the public safety arena, FCC officials have received and granted 1,968 of the 2,019 LMR licensing applications received through August, according to the ULS database.

If the 51 pending applications are granted, the public safety sector would be on pace to have 3,066 licenses approved this year.

That figure would be similar to the public safety LMR licensing totals for five of the last six years, with the lone exception being the pandemic influenced year of 2020, when 2,763 licenses marked the only year since 2017 that the total was not between 3,000 and 3,200.

The ULS also updated the 2023 LMR licensing activity for the public safety sector. In the industrial/business sector, the online ULS shows 6,984 of the 7,227 LMR license applications this year have been granted by the FCC.

If the 243 pending applications are approved, the business-industrial licensing activity would be on pace to have 10,945 licenses approved in 2024. If realized, such a total would represent a dramatic increase in industrial/business licensing activity, which has not topped the 10,700 figure since 2019, when the FCC granted 10,780 LMR licenses for that sector.

Whether this threshold can be reached is questionable, but the current pace certainly provides optimism that the FCC will approve more than 10,000 business-industrial licenses this year, a noticeable activity level, after less than 9,800 licenses have been approved for the sector in each of the last four years.

Updated figures from 2023 revealed that the FCC has approved 9,791 industrial/business LMR license applications for that year, with some applications still pending.
This marks the fourth consecutive year in which the industrial/business sector has failed to see 10,000 LMR licenses granted, although it was the largest during that period.
While industrial/business LMR activity of the past two years is favorable compared to the recent past, it remains near the lowest totals historically.

During the first 16 years of the online ULS database, the business-industrial sector had at least 11,250 licenses approved. The FCC granted between 10,200 and 10,800 business-industrial LMR licenses each year between 2017 and 2019, and then the annual total has failed to reach the 10,000 mark during each of the past four years.

Even if all pending business-industrial LMR licensing applications are approved, the projected 2024 total—an optimistic estimation—would represent a 63 percent decrease from the all-time high total of 29,569 licenses granted during the narrowbanding-influenced year of 2012.

(Article prepared by Mr. Paul Fussey, ALMR Operations Manager, with excerpts taken from "*FCC data shows encouraging LMR licensing activity for business-industrial sector,*" by Mr. Donny Jackson, August 2024.)

Alaska Land Mobile Radio
Operations Management Office
5900 E. Tudor Road, Suite 121
Anchorage, AK 99507-1245

Land Mobile Radio Remains the Most Reliable Technology

From the early beginnings of the nationwide public-safety broadband network (NPSBN) concept, the network was considered supplemental to existing land mobile radio (LMR) communications systems. Certainly, it could be an important supplement to existing mission-critical systems by providing a variety of additional information to first responders, e.g. blueprints of a building for firefighters. The network was also to provide additional interoperability between public-safety agencies on a nationwide basis, but it was not intended to replace public safety LMR communications systems.

Although recommendations for the buildout included backup power, hardened sites, and redundant backhaul, none of those requirements were put on AT&T. Individual agencies lost control of how the particular system serving them would be constructed and operated.

There have been numerous examples of failures of carrier networks in hurricanes or other disasters. For those agencies that buy into FirstNet for dispatch services, dispatching stops when the network fails, leaving first responders to fend for themselves.

The takeaway story is that smart public-safety agencies will maintain and even upgrade their LMR systems. These systems can be made highly reliable, so they are able to operate even during disastrous events. More importantly, the local agencies can design and control the systems to meet their individual coverage and reliability requirements. Well designed LMR systems continue to operate in the most extreme situations. The lives of first responders and citizens in the communities require the reliability that LMR systems provide.

(Article prepared by Mr. Paul Fussey, ALMR Operations Manager, with excerpts from the Mr. Ralph Haller/FCCA article, IWCE Urgent Communications, March 2024.)

Help Desk (In the Anchorage Bowl): 907-334-2567

Toll Free within Alaska: (outside Anchorage) 888-334-2567

Fax: 907-269-6797

Email: almr-helpdesk@beringstraits.com

Website: http://www.alaskalandmobileradio.org

Follow us on Twitter: @ALMR_SOA

Active Shooter Exercise

In August, officials with Ted Stevens Anchorage International airport conducted a mass casualty exercise that involved an active shooter scenario.

The ALMR SMO ran several reports to see how the ALMR system handled the extra radio traffic. There was a large jump in site utilizations from the previous week; however, the number of PTT busies were lower and no complaints were received.