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ALMR Help Desk

In Anchorage: 334-2567

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

E-mail: almr-helpdesk @beringstraits.com

Follow us on Twitter: @ALMR_SOA

Inside this issue:

New ALMR Logo

It's official! The Alaska Land Mobile Radio (ALMR) Communications System has a new logo.

As you may recall in the October 2020 newsletter, a contest to design the new logo was announced. Several members from various agencies submitted their concept art and drawings. Those were presented to the ALMR Executive Council (EC) in January of this year. The council rank ordered the submissions and the top two were rendered by Hoke Designs into a final draft concept. There were additional changes made and those were again sent to the EC for voting.

The votes were counted and the winning design was chosen, Thank you again to all members who submitted their designs!

The new logo is already in use on the website and will replace the old logo on ALMR documentation as it comes up for review.

(Article by Ms. Sherry Shafer, Operations Management Office)

Satellite Radio Interoperability – A Model for Statewide LMR

Statewide coverage for Alaska LMR has been a key goal and a critical need for agencies operating in remote environments beyond the coverage of the ALMR footprint. To help meet that need, Arcticom developed a successful model to deliver ALMR coverage statewide.

Over the past year, Arcticom worked with Icom America and their satellite series of radio products, specifically the IC-SAT100M, a fixed satellite radio console utilizing Iridium Communication's new low-earth-orbit satellite constellation with global coverage. The IC-SAT100M is split between the main console and the antenna with an integrated Iridium chip. Both the main console and the antenna can use a Power-over-Ethernet (PoE) switch as the power supply and a LAN cable connects the main unit and the antenna allowing for long cable runs at a cost-effective price. Having tested the console extensively, it is clear satellite technologies have developed at a rapid pace. The Iridium network provides global L-Band coverage which is weather-resistant and low latency due to the low-earth orbit. Arcticom deployed a handheld version of the IC-SAT100M (IC-SAT100) and provided high-quality group communications to numerous agencies outside of ALMR coverage.

To connect the IC-SAT100M to ALMR, Icom America provided their latest radio interoperability gateway, the VEP-G4. This gateway can bridge almost any modern communications system, including LTE radios, wireless LAN, analog radio systems, P25, DMR, SIP Phone, and in this case a satellite radio system. The gateway is extremely feature-rich and user friendly and provides all the settings needed to successfully bridge an LMR network with satellite. By having a 'donor' satellite and ALMR radio bridged by Icom's VE-PG4, ALMR users within the coverage area would be able to communicate with satellite radio users outside of the coverage footprint. The IC-SAT100M and VEP-G4 are connected by a LAN cable and cabling that Arcticom created to connect the VEP-G4 to a Motorola APX 7500 console. By appropriately tuning the audio levels and adding embedded latency (all done *(continued on page 3)*

What a Year! The Operations Manager Reflects

WOW! It seems like I was just writing my first article for the newsletter only a few months ago. It's hard to believe a year has passed already and what a year it was with COVID-19 and the pandemic restrictions impacted everything and everyone—including the GTR/Quantar upgrade project.

The ALMR User Council and Executive Council were forced online which is something I'm happy to announce is changing this month! ALMR training also went online to the benefit of the ALMR community. With the use of technology, we were able to deliver three new courses with an average attendance of 30+ attendees per class. We were also able to record those sessions for later viewing, when it is most convenient for your agency staff and, when coupled with the information sessions last fall regarding the IC Zone to Interoperability Zone changes, we had a number of opportunities for good (virtual) facetime with member agencies.

We just recently posted the first set of "Video Vignettes" which can be located on the ALMR website (Yes, ALMR has a website!) under the Training menu on the home page. Go check it out at alaskalandmobileradio.org. These short, single-topic videos are meant to help you and your organization's personnel get up to speed quickly to get the most out of the ALMR system. Currently, the videos feature some programming tips for the Interoperability Zone changes, as well as Motorola XTS and APX portable subscriber operations. We hope to be able expand to other manufacturers' products in the coming months.

We also embarked upon a couple of survey projects, which you will see repeated later this year. First will be the annual ALMR User Survey—this is your opportunity to provide feedback about ALMR, being a member, or anything else you would like to share. Second will be the annual ALMR Coverage and Site Prioritization survey. We will be working to improve upon the survey this year as last year's version didn't clearly tackle "priority" sites and we want to fix that.

Another project I personally took on was calling all the points of contact for ALMR member organizations. I really enjoyed the conversations I had with those members I spoke to, and for those of you that just heard my voicemail don't feel left out, because I'm considering repeating the effort this year too. I believe an organization is only as strong as its membership and it grows through a shared sense of community. It also helps when issues arise and you have someone who you can speak to directly.

An article reflecting back over the past membership year would be missing the mark if it did not highlight some system updates and statistics.

The ALMR system carried 13,189,297 group and individual calls and 24,499,217 push to talks (PTTs) during the FY21 membership period. That is impressive in light of the early lock-downs and quarantines that were in place across the state.

Even in the face of all that came with the pandemic restrictions, scheduling changes and logistical challenges, the System Management Office has been able to install 39 GTR site radios. That is a phenomenal achievement given the challenges. Please join me in congratulating their success so far.

By now you should understand ALMR will be moving to time division multiple access (TDMA) (or what is commonly referred to as Phase 2 operations) after the GTR upgrade project and other necessary core system upgrades occur. After the system is fully TDMA, organizations will have a period of time to upgrade or replace current frequency division multiple access (FDMA) equipment. The Operations Management Office will be working with the Executive Council to arrive at a workable, manageable deadline.

Part of our support for moving to TDMA comes by the way of engaging our vendor community, making them aware of upcoming changes to the ALMR system and by working hard to have new options for TDMA approved equipment for use on ALMR. In case you forgot, all equipment operating on ALMR must go through a thorough acceptance testing process before we put it on the list of approved equipment (which can be found on the ALMR website).

A few closing points:

- I would like to thank Mr. Joe Quickel (trainer extraordinaire) for his multiple years of support to ALMR and want to wish him well on his retirement!
- I would also like to thank Mr. Scott Stormo and the staff of Alaska Public Safety Communications Service for all they do to keep the interconnecting network that provides the backhaul services for ALMR up and running.
- And a big "Thank You" to Mr. Del Smith who has agreed to continue on in an advisory role to the Operations Management Office!

And finally, ALMR is a member-driven organization! We need and value your participation in moving us forward. To that end, I would ask you to consider reaching out to your locally elected officials and legislators to emphasize the importance of ALMR, why it matters to YOUR community, and why improvements to it are critical for the future safety of Alaskans!

(Article by Mr. Chris Letterman, ALMR Operations Manager)

(continued from page 1) within the VE-PG4 GUI), the result was a high-quality and reliable bridge between the two networks with low latency. The results were presented to numerous agencies during a presentation at Arcticom headquarters last month.

Satellite-based radios with a powerful radio gateway can provide a meaningful and cost-effective way to extend the coverage of ALMR statewide. Arcticom has extensively tested these solutions and are confident in their ability to perform in areas ALMR is currently unable to reach. You can reach out to Arcticom for additional information and a demonstration of this solution at (907) 276-0023 or via email: sales@arcticom.com.

(Article by Bruce Hellenga, Arcticom)

National Fire Protection Agency Improved Radio Standards

The National Fire Protection Association (NFPA) just unveiled their new standard for portable radios used by emergency services in the hazard zone. For the first time, NFPA defines a very rugged radio and speaker microphone designed for the inherently hostile environment that firefighters, hazardous material (HAZMAT) teams, or other agencies that operate in a hazard zone.

It was decided from the beginning the standard would encompass both the radio and the remote speaker microphone (RSM) used by most departments, because the RSM is often the item most exposed to the fire environment. The standard is only concerned with two-way voice devices; hence pagers and data-only devices are not considered. Finally, the standard is agnostic to the specific radio frequency and communications techniques used (analog vs. digital modulation, trunking vs. non-trunking). As a result, the new standard will be useful for the immediate future no matter the voice technology used, but it may also be useful to other emergency services entities worldwide.

At minimum, every radio must allow for analog conventional (non-trunked) transmission, the 'lowest common denominator' method of transmission among all emergency scene radios. Also, interoperability among all NFPA-1802-certified radios and all NFPA-1802-certified remote speaker microphones is provided by a universal connector; thus, you can use a brand X radio and brand Y speaker microphone.

Additionally, the radio will have a data-logging memory that stores up to 2,000 recent user events, up to 3,000 received user IDs, and date/time stamped operating events, such as mayday activation in order to provide information for the fire service and vendors on the performance of the equipment under stress.

The standard is very wide ranging; for specific details, refer to https://www.nfpa.org. The standard can be viewed online at no cost; it can't be copied/downloaded without purchase.

(Article excerpts from Mission Critical Communications Weekly e-Newsletter, March 31, by John Facella, P.E)

Radio Resource Media Group Announces New P25 eBook

With more than 2,800 systems in more than 80 countries, Project 25 (P25) has become one of the most important critical communications technologies for public-safety agencies and other critical communications users in the United States and around the world.

Since the first P25 standards were developed more than 30 years ago, they have continued to evolve to incorporate new technology and address the many different challenges that critical communication users face, and will continue to do so thanks to the dedication of the many organizations involved. Groups such as the P25 Technology Interest Group (PTIG) and the P25 Steering Committee, as well as industry vendors, manufacturers, and organizations have played key roles in the development and success of P25 and the continued collaboration around the standard will ensure it remains relevant.

Even as agencies begin to explore use of broadband technologies, such as LTE and 5G, P25 remains an indispensable tool for critical communications. The general consensus in the industry is LTE is still a long way from replacing LMR communications, if that transition ever happens. Instead, it is important to leverage the benefits of LTE as a complementary technology to LMR, while continuing to rely on the many benefits of P25.

Radio Resource Media Group (RRMG) released "Advances in P25: Standards | Interoperability | Security." The eBook is intended as an in-depth resource on how best to leverage P25 benefits and capabilities for agencies considering deploying a new network, as well as those already operating P25 systems. To ensure the most current and accurate information in this eBook, RRMG partnered with PTIG and the P25 Steering Committee to bring the latest developments in the standard, interoperability, and security. Because of their valuable and insightful participation, RRMG believes this eBook is the most comprehensive and accurate resource available today.

The first few sections detail benefits of P25 systems, the middle sections dig deeper into interoperability, testing, and system security (hot topics for today), and it concludes with an examination of funding options, several use cases for P25 technology, and an update for LMR/LTE interworking.

(Mission Critical Communication/Radio Resource International e-newsletter, "Radio Resource Media Group Announces New P25 eBook," By Danny Ramey, Editor, June 08, 2021)

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

Spotlight on the City of Palmer

Palmer, Alaska, is situated approximately 42 miles northeast of Anchorage, encompasses 5.1 square miles of land, and has a population of roughly 6000, with the greater Palmer area having a population of around 20,000 and a footprint of 72.4 square miles.

The City of Palmer is served by Palmer Police Department, Palmer Fire and Rescue, and Palmer Department of Public Works, all operating on the ALMR system. Palmer PD is comprised of 21 officers and additional support staff; Palmer Fire Department is comprised of approximately 50 personnel including responders, the officer corps, and support staff; and Palmer Public Works operates with approximately 20 employees.

The Matanuska-Susitna Borough provides EMS services to the city and surrounding areas, while the Alaska State Troopers provide law enforcement and rescue services outside of the City of Palmer boundaries. Both are on ALMR and can interoperate with Palmer agencies when needed.

With multiple city agencies, significant distances to cover and daunting terrain, the utilization of ALMR is of great importance for secure, accurate, reliable, and operable communications which is used often daily for response coordination. Palmer also utilizes ALMR for inter-city communications and multiagency response.

The ALMR operations staff has assisted Palmer agencies with subscriber inventory and accountability, airtime usage tracking, talkgroup coordination, and duplicate ID identification and resolution. System management staff has provided city agencies support for subscriber codeplug review, encryption utilization, daily system status, and site information.

The strategic alliance between ALMR and the City of Palmer is a valuable asset in the success and growth of the city's communications operations.

(Article by Mr. Jim Goodman, Communications Specialist, City of Palmer)

Help Desk (In Anchorage Bowl): 334-2567

Toll Free within Alaska: 888-334-2567

Fax: 907-269-6797

Email: almr-helpdesk@beringstraits.com

Website: http://www.alaskalandmobileradio.org

Follow us on Twitter: @ALMR_SOA

APCO 2021

The year's Association of Public – Safety Communications Officials (APCO) conference will be held at the Henry B. Gonzalez Convention Center in San Antonio, Texas, from August 15 - 18. ALMR Operations Manager Chris Letterman will be presenting.

IWCE 2021

The International Wireless Communications Expo (IWCE) will be held at the Las Vegas, Nevada, Convention Center from September 27 - 29.