

ALMR INSIDER

Volume 14, Issue 3

July 15, 2020

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Phase 2 Capability Required of All New Radios on ALMR

Under contract to the State of Alaska (SOA), Motorola Solutions has begun an expedited replacement of the current P25 Phase 1 frequency-division multiple access (FDMA) Quantar site radios at 71 SOA-owned ALMR sites with P25 Phase 2 time-division multiple access (TDMA) GTR8000 site radios. This update to the ALMR System will, when completed, double the available voice channel capacity at all ALMR sites.

In order for ALMR users to be able to take full advantage of Phase 2 capabilities, it requires that ALL radios on the System be Phase 2 enabled. If a Phase 1 radio is involved in a transmission on a site, the System defaults to Phase 1 for that exchange, negating the benefits of double-channel capacity at that site for the period of the conversation.

Therefore, the ALMR Operations Management Office (OMO) is advising all agencies

and vendors that any new subscriber radio that an agency is requesting be added to the system, must be Phase 2 TDMA enabled. For the time being, Phase 1 radios will be allowed to continue to function on the System. However, at a date yet to be established, all radios operating on the System will be required to be Phase 2 enabled.

Agencies planning on purchasing radios from this point on, need to confirm with their respective vendors, the radios they are purchasing are, in fact, Phase 2 enabled. Although, radios can be purchased as Phase 2 capable, not enabled, doing so may involve additional cost to have the radio "flashed" (i.e. updated) to Phase 2 enabled after the initial purchase.

(Article by Mr. Del Smith, ALMR Operations Manager - retired)

Introducing the New ALMR Operations Manager

Hello Everyone,

First and foremost, I would like to commend and thank Mr. Del Smith for his years of service and dedication to ALMR and for the guidance and pass-down he provided to me during the month of June. I have big shoes to fill and much to learn and understand about our ALMR community in Alaska.

I would like to share a little about my background. From 2017 until now, I have worked in Cyber Security and Information Technology (IT) Project Management as a Consultant with Wostmann & Associates. Prior to that, I held other IT positions with State of Alaska agencies and also in the private sector.

I am originally from Kentucky, transplanted by the US Navy in 1994 to a quaint little island in the Aleutians (Birthplace of the Winds). I served in the Navy as an Electronics Technician and after leaving the service, I

worked for various communications companies in Alaska, before starting with the State. At the State, I began as a technician in 1998 and advanced along the path of my career, which culminated in 2013 when I was asked to serve as the state's Chief Information Security Officer (CISO), where I managed the State Security Office until July 2017.

I am impassioned when it comes to sharing knowledge and helping organizations, such as ALMR, with the intricacies of managing the human and technology nexus. Understanding the key and critical use cases of ALMR and getting to know you and the ALMR community, the User Council, and the Executive Council will be my focus points for the coming year.

Feel free to reach out to me at 907-334-2636 or at chris.letterman@wostmann.com.

Chris Letterman, ALMR Operations Manager

Where Did the Time Go?

As I write this, it is truly amazing to realize that approximately 23 years have passed since I first became involved in early discussions and planning for what is now the Alaska Land Mobile Radio (ALMR) Communications System, serving 130 Alaska public safety agencies.

The fundamental objective of ALMR is to provide reliable and secure interoperable communications for Alaska's first responders, not only day to day, but also during critical emergency situations, exercises and multi-agency, multi-jurisdictional responses. I believe ALMR has met and will continue to meet that objective in the coming years.

I have had the honor of serving the ALMR user community as the Operations Manager for the past 13 years. The Operations Management Office (OMO) contract was up for renewal this year, and I opted not to "sign on" for another term. I have enjoyed getting to know members of the user community and working to ensure ALMR is providing the level of communication services they deserve, and rightfully expect.

I am pleased to announce Chris Letterman, Wostmann & Associates, became the new Operations Manager on July 1, and the good news is, he will be able to count on the exceptional support and wise counsel that Ms. Sherry Shafer has provided me as a key member of the OMO.

Given the length of time I have been involved, I have a deep and abiding interest in ALMR's continued successful delivery of the important communication services it provides. I know it will, because of people like Travis Conant, ALMR System Manager, and his dedicated staff in the System Management Office.

Also, critical to the continued success of ALMR is the Alaska Public Safety Communications Service (APSCS). APSCS manager Scott Stormo and his technicians oversee and maintain the State of Alaska Telecommunications System (SATS). ALMR is dependent on a well maintained, fully functioning SATS to provide the wide area connectivity that allows ALMR (continued on page 4)

Off-Network Communications

Call it off-network, talk-around, simplex, one-to-one, one-to-many, or peer-to-peer for IT folks, it is all the same. Regardless of how good a network or series of networks is, there are times when those in the field need to take their communications off the network and down to a local level. Public safety radio communications began with one-way from the stationhouse to the vehicle and then evolved in the 1930s to two-way radio base station to mobile and then mobile to mobile. After a number of technological advances, we now have multiple networks. Land mobile radio (LMR) handles voice-only push-to-talk (PTT) and some very low speed data, and FirstNet (built with AT&T) and other broadband networks handle voice in the form of dial-up and PTT, as well as text, data, video and still pictures. Even so, there are times when public-safety personnel are out of network coverage, time when some are in coverage and some are not, and times when some are within network coverage, but only need to communicate on a local basis.

Some public-safety agencies do not use off-network, or use it rarely, but many agencies use off-network communications for every incident they respond to and many fire-service incident dispatches include a working off-network channel. Off-network is often preferred by swat teams, detectives and other units that need to stay in contact without taking up network resources. Another reason is to keep it local, so fewer people with radio scanners or internet rebroadcasting services can listen to an incident in progress. The issue of eavesdropping is non-existent with broadband networks so far, especially FirstNet since a great deal of time and effort has been spent to ensure FirstNet is a secure network.

One of the most compelling uses for off-network is to communicate in areas where the network can not or does not penetrate. Having plenty of network signal standing in

front of a building does not mean public-safety professionals will have network coverage as they enter the building, descend to a basement, or move deeper into the building. Today, both LMR and FirstNet are penetrating deeper into buildings than ever before and networks or landlords are installing in-building communications, especially in large buildings. However, wireless networks are not always available inside buildings, in sub-basements or underground parking garages, or in rural areas not covered by wireless networks. Off-network communications is a must-have for most, or all, of the public-safety community.

There is a need today and far into the future for robust off-network communications capable of multiple channels or groups, since during major incidents, some public safety groups want and need their own "private" channel(s) to manage their portion of the mission. During a hostage incident, they might need one channel for swat, one for crowd control, another for hostage negotiations and a few more. The greatest number of direct, off-network channels are needed during wildfires as the Incident Command adds layers of management and deployment. In some California fires where I provided volunteer communications support, all available VHF simplex channels were assigned resulting in sixty to seventy channels being used.

We have the communications tools, technology advances, and users who need what the wireless community provides. Now we need to put it all together so interoperability and on-network versus off-network are no longer issues. If we all work toward this goal it will be achievable sooner rather than later or never.

(Article excerpts taken from Public Safety Advocate, Mr. Andrew Seybold, June 4, 2020)

It Takes a Disaster to Prompt a Change

It has taken many disasters to awaken the public and Members of Congress to public safety's need for a nationwide network to enable agencies from different cities, counties, or states to be summoned to an incident and, upon arrival, communicate with those already on the scene. My first article about the lack of interoperability was written in 1981, but the problems for public safety predated that by decades.

The first major disaster happened 25 years ago when the Murrah Federal Building in Oklahoma City was bombed and there was a tragic loss of life. Public-safety agencies were summoned from many areas, and state and federal agencies arrived in large numbers. The lack of communications between all these various agencies hampered rescue efforts and some turned to cell phones. However, they soon found that it was impossible to make a connection, because so many citizens and reporters were already using their cell phones. After-action reports pointed to the lack of coordinated communications as having a major impact during the incident.

In 2001, we were faced with the 9/11 attacks on the United States and a huge communications failure was again blamed for a lack of emergency coordination and the loss of many first-responder and citizen's lives. Again, nothing much was done to improve public-safety communications. Multiple efforts were made within the public-safety community to address the issue but nothing concrete was taking hold at the federal level. 9/11 was followed a few years later by hurricanes Katrina and Sandy.

It was not until 2007 that it appeared things might be moving forward to provide public safety with what it needed in the way of communications. The public-safety community knew it needed to come together and began actively soliciting Congress, the FCC, and the Executive Branch for assistance in 2009. Still, it took until 2012 to pass a bill in both houses of Congress. This bill became the law that established FirstNet and earmarked some money from future auctions, as a starter kit. It took this new organization until 2017 to issue a contract (to AT&T) to build and operate what is known today as "FirstNet." FirstNet is an example of what can happen after major events push people into action. From the Oklahoma bombing to today, it took 25 years of effort on the part of public safety to reach the point where FirstNet is a reality. 25 years!

Now FirstNet is up and running and public-safety communications are much improved during this nationwide pan-

dem. However, another communications issue has come to the forefront and that is the inability for school-age children in rural and poverty areas to study at home and for citizens and businesses to connect to the Internet. What is maddening about this lack of broadband and Internet access is that this too has been recognized for many years. From 2011 when the first reports were created until today, much has been accomplished in providing rural broadband capabilities, but a lot more should have been done in this timeframe. Today there are more than fifteen different types of grants and loan programs from an assortment of agencies and while these agencies offer funds to build out broadband services, few provide ongoing funds for continued operation of the broadband networks.

Pressure to close the digital divide is coming from rural communities, counties, cities, school districts, farmers, medical personnel, and many more. However, we once again appear to be approaching solutions for narrowing the digital divide in a piecemeal fashion. There should be a concerted effort to form a rural broadband consortium that includes all stakeholders, because there is no one-size-fits-all solution for rural broadband. The FCC recently acknowledged that its broadband coverage maps are incomplete or out of date. Many states have once again begun assembling their own maps in order to determine where they stand today and what they need to do to cover their rural areas. Some seem to believe that as soon as all the Low Earth Orbiting (LEO) satellites are whizzing around, the entire world will be covered with broadband. I am a doubter for several reasons, including how much will the service cost those living in rural America who are struggling to make ends meet?

We can, once and for all, attack the digital divide in a coherent and logical fashion by combining available funding sources and perhaps adding more funds, or we can continue to complain about the lack of broadband services and limp along until yet another disaster occurs. I hope it does not take as long to close the digital divide as it did for FirstNet to become a reality. We are facing a nationwide crisis and we need to approach the digital divide as a nationwide issue that can and must be overcome now. We have many different technologies and many vendors and technology users are willing to be a part of the solution. What we don't yet have is a group of people to keep the need for interoperable public-safety communications in front of those with the power to solve the problem.

(Article excerpts from Public Safety Advocate, Andrew Seybold, April 30, 2020)

New Operations Management Office Contract

The Operations Management Office (OMO) began a new one-year contract with the State of Alaska on July 1. The first term of this contract expires on June 30, 2021. There are nine (9) optional one-year renewals. These renewal options will be exercised at the sole discretion of the State.

Some changes under the new contract will be an upgraded web site and training opportunities to include familiarization with the system, as well as targeted training on specific topics, such as radio concepts, radio operations, emergency button usage, incident command usage, and portable, mobile and console radio operations for State and local users of ALMR.

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IWCE and APCO 2020 Annual Meetings

The International Wireless Convention and Exposition (IWCE) in-person annual meeting, normally scheduled for March each year in Las Vegas, was initially postponed until late August due to the COVID-19 pandemic.

Unfortunately, conditions that would allow for an in-person meeting are not evolving with regard to the pandemic, and the decision was made that IWCE will be a virtual event to be held the week of August 23-28.

The annual IWCE meetings are an extremely valuable source of information for first responders and also provide an excellent opportunity to meet with wireless experts, vendors and peers and discuss the current state of the technology and issues that impact first responder communications.

Although IWCE is a virtual event this year, much valuable information will be available and it will be a good opportunity for ALMR member agency personnel to learn.

Also impacted by the COVID-19 pandemic, the Association of Public Safety Communications Officers (APCO) annual meeting scheduled for August 2-5 in Orlando has been canceled and is scheduled for August 15-18, 2021, in San Antonio.

As is the case with the IWCE annual meeting, the APCO annual meeting also provides an excellent opportunity to consult with not only peers and vendors, but also with nationally recognized experts about the evolving status of wireless communications. It also provides the ability to network with others in the field and discuss common issues and/or problems others have experienced, with a primary focus on public safety dispatch and E-911 functions and technology.

Please take the opportunity to attend these events, if at all possible.

(Article by Mr. Del Smith, ALMR Operations Manger - retired)

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Where Did the Time Go? (continued)

users to talk with other users anywhere on the System, when needing to do so.

I am pleased to be able to leave ALMR in good hands as I step away from active involvement in the management of ALMR.

Thank you,
Mr. Del Smith, ALMR Operations Manager (retired)