

ALMR INSIDER

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ALMR and AWARN: Are they Interoperable?

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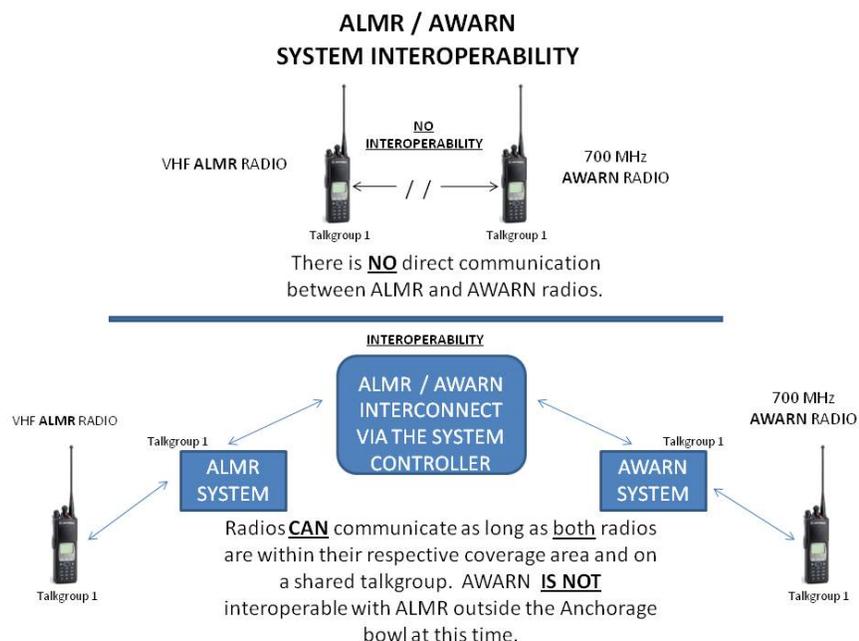
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The Anchorage Wide Area Radio Network (AWARN) is licensed to operate in the 700 MHz range of radio spectrum. The Alaska Land Mobile Radio (ALMR) Communications System is licensed to operate in the VHF (30 to 300 MHz) range. Because they operate in different bands of the radio spectrum, direct radio-to-radio communication (simplex) between ALMR and AWARN radios is not possible.

Given all of the emphasis on the need for public safety responders to be “interoperable,” particularly since 9/11, how can the Municipality of Anchorage (MOA) public safety responders and ALMR-equipped public safety responders communicate with each other during events in the MOA that require a multi-agency, multi-jurisdiction response?

As trunk radio systems, ALMR and AWARN both have “Zone Controllers” (i.e. computers)

that manage the voice and data transmissions over their respective systems. ALMR’s primary System Controller is located in Anchorage and “manages” the entire 81-site system, which currently serves over 15,000 radios. It also functions as the Zone Controller for the South Zone, which includes all ALMR sites south of the Denali Highway. An additional ALMR System Controller is located in Fairbanks, which provides backup for the primary System Controller, but also functions as the Zone Controller for the North Zone, serving all ALMR sites north of the Denali Highway. Connectivity between the two controllers and ALMR sites is provided by the State of Alaska Telecommunications System (SATS) and the Municipality of Anchorage microwave systems which enables ALMR users to communicate radio to radio anywhere in the ALMR coverage area, which is primarily along the road system. The coverage area currently



ALMR and AWARN (continued)

stretches from Fairbanks in the North to Ketchikan in the South and from the Canadian border on the East to Kodiak on the West.

In the same way an ALMR Controller “manages” the ALMR System, the AWARN System Zone Controller “manages” all of the AWARN radios through microwave connectivity to the initial six AWARN simulcast sites in the Anchorage bowl area. AWARN is currently planned to include a total of 15 sites. This will increase the AWARN coverage area, thereby increasing the potential for interoperability with ALMR.

Although the two systems operate in different radio spectrum bands, interoperability between first responders operating is addressed by connecting the ALMR System Controller and the AWARN System Controller. The connection between the controllers serves as a “translator” between the two spectrums ensuring that a transmission on ALMR VHF radios is received and understood by AWARN 700 MHz radios and vice versa.

While the System Controllers enable interoperability between the two systems, the limiting factor is that radios from both systems must be within their particular system coverage area, and also within range of one of their repeaters, to be able to communicate. The interoperability between ALMR and AWARN is only possible when this criteria is met and the radios are programmed with the appropriate trunk radio talkgroups which informs their System controllers they are authorized to share that talkgroup.

Annual Customer Satisfaction Survey Results

For the past four years, a Customer Satisfaction Survey has been distributed to ALMR member agencies in early August. This allowed the Operations Management Office (OMO) sufficient time to distribute the surveys, collect and tabulate the data, and then be prepared to provide the results of the survey at the Annual User Council (UC) conference.

The purpose of the survey is to provide the OMO, System Management Office (SMO) and the UC with comments, both positive and negative, regarding the System’s ability to meet the communication and interoperability needs of its public safety first responders.

Armed with this information, more informed decisions can be made regarding the current and future course of ALMR with regard to customer service, training, main-

An example of the interoperable capabilities of ALMR and AWARN follows (please note this is a fictitious event for demonstration purposes only):

A Glennallen area volunteer fire department engine equipped with an ALMR radio, responding to the Anchorage area to provide assistance on a fire, can communicate with AWARN System radios operating in the Anchorage area. Since they will be in the ALMR coverage area during their entire drive, they will be able to communicate whenever necessary with AWARN radios and with their home dispatch center, if necessary.

An Anchorage Fire Department engine responding to provide assistance during a wild land fire in the Glennallen area will be able to communicate with their Anchorage Fire Dispatch, or ALMR radios in Glennallen, using their AWARN radios until they depart the AWARN coverage area. Although they will be in the ALMR coverage area during their drive to Glennallen, they will be out of range of the AWARN System.

Even though the technology of ALMR and AWARN enables interoperability between the two systems, prior planning, coordination and training is still key to successful communications between first responders during any multi-agency, multi-jurisdiction incident.

tenance, expansion and improvement of coverage, and technology refresh requirements.

In order for the survey to be of real value, the OMO seeks the broadest possible dissemination among member agencies. Although we do not keep a record of the number of personnel within the agencies who use an ALMR radio, we believe that out of the 105 member agencies there are substantially more users than the 58 responses we received.

As we endeavor to provide a communication system that meets agency needs, participation by those that use it is imperative. Feedback on the System may also be provided to the OMO/SMO any time during the year.

The following charts, derived from the responses received, constitute the overall satisfaction with the System reliability and meeting agency needs. (continued on page 4).

Statewide Admin Zone

The Statewide Admin Zone can be programmed into ALMR radios for use by agencies that are providing support functions to an incident such as logistics, finance and administration. In most cases, the Admin talkgroups can be used, when assigned, by EOC personnel or those deployed to an Incident Command Post. It would be activated by the IC to minimize any confusion between “forward incident operations” and “rear area” support as well as to maintain chain of command and assist with continuity of incident operations. However, if for any reason an incident’s communication requirements exceed both the Regional and Statewide IC Zone capabilities, assignment of the Statewide Admin Zone is advised.

| Statewide Admin Zone | |
|----------------------|------------------------|
| ADMN1 | IC Administrative Ch 1 |
| ADMN2 | IC Admin Ch 2 |
| ADMN3 | IC Admin Ch 3 |
| ADMN4 | IC Admin Ch 4 |
| ADMN5 | IC Admin Ch 5 |
| ADMN6 | IC Admin Ch 6 |
| ADMN7 | IC Admin Ch 7 |
| ADMN8 | IC Admin Ch 8 |
| ADMN9 | IC Admin Ch 9 |
| ADMN10 | IC Admin Ch 10 |
| ADMN11 | IC Admin Ch 11 |
| ADMN12 | IC Admin Ch 12 |
| ADMN13 | IC Admin Ch 13 |
| ADMN14 | IC Admin Ch 14 |
| ADMN15 | IC Admin Ch 15 |
| ADMN16 | IC Admin Ch 16 |

Assigned by IC Commander
The Region D Dispatcher is the authority to use these channels

Real-time Interoperability

The Anchorage Police Department (APD) and the Alaska State Troopers (AST) recently utilized the interoperable communications capabilities available to Alaska Land Mobile Radio (ALMR) and the Anchorage Wide Area Radio Network (AWARN) users when operational circumstances require communications between personnel of the two public safety agencies.

The funeral for Senator Ted Stevens on August 18 drew hundreds of mourners from all over Alaska and around the nation, including Vice President Biden and many current United State Senators. The traffic and security issues of such a gathering presented APD and AST personnel with what would have been a communications and coordination challenge in the past. However, given the interoperable capabilities of ALMR and AWARN and some prior planning, communications between APD and AST personnel assigned to the funeral were excellent according the supervisors involved from AST and APD.

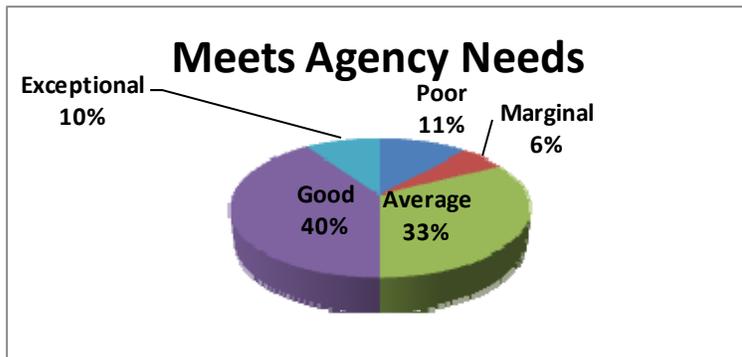
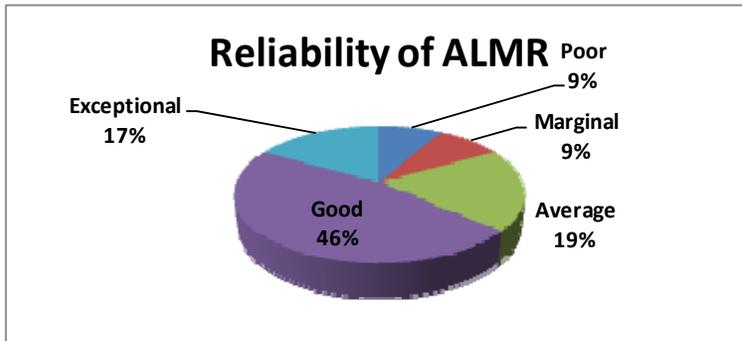
In anticipation of the joint operation, Sgt. Justin Doll, APD, contacted Mr. Jerry Wilson, Municipality of Anchorage Radio Shop and explained the need to communicate with AST personnel for the upcoming funeral. Although APD has not yet transitioned to AWARN, the six simulcast AWARN sites have been in operation for several months and are being used by several municipal agencies and was therefore available. As is the case with ALMR, the code plug for AWARN radios includes the statewide Incident

Command Zone and Regional Incident Command zones.

The Regional Incident Command zones, with the exception of the Municipality of Anchorage, which is Region F, are based on the AST detachments (A, B, C, D, E) geographical boundaries. Mr. Wilson recommended to Sgt. Doll that the 20 radios Sgt. Doll needed for the event be programmed with the Region F Incident Command zone talk groups, i.e. Hail, IC2, IC3, etc and the statewide Incident Command Zone. Mr. Wilson and Sgt. Doll then called Lt. Steve Adams, AST, who was in charge of the AST personnel responsible for the duties involving the funeral. Since the AST ALMR radios have all of the Regional Incident Command Zones, including Region F already programmed, Lt. Adams and Sgt. Doll were quickly able to formulate a communications plan and agree that all communications between the two agencies personnel involved with the funeral duty would be conducted utilizing the Region F, Incident Command Zone IC2 talk group.

Although the interoperability requirements for this particular joint operation were very simple, understanding ALMR and AWARN capabilities and deliberative planning beforehand will ensure that more complicated communications requirements between AWARN and ALMR first responders will be just as successful.

Annual Customer Satisfaction Survey (cont)



A complete breakdown of survey results can be obtained from the OMO by emailing sherryshafer@5starteam.net.

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FACTOID

Operational ALMR Sites: 81

Operational AWARN Sites: 6

Subscriber Units: 15,884

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