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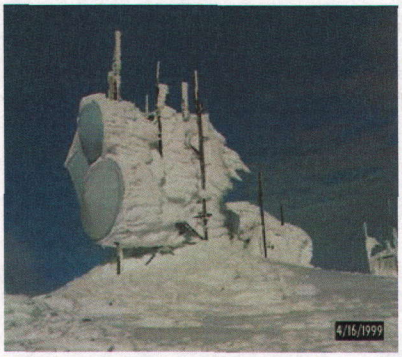
Talking Points

Alaska Interoperable Communications

Alaska Land Mobile Radio (ALMR)

Heney Range-Cordova



Heney Range-Cordova

INSIDE THIS ISSUE:

From the Commissioner, Dept. of Military & Veterans Affairs

Major General
Craig E. Campbell

The Alaska Land Mobile Radio System (ALMR) is an important component of Governor Frank H. Murkowski's vision for preparedness and interoperable communications across Alaska.

It has been an exceptionally productive year for ALMR. The extraordinary achievements of this year's construction season are detailed in this newsletter. As often occurs, Alaska is the place where ideas and concepts are developed and demonstrated first. This is certainly true in the case of ALMR. Among the most notable achievements during 2005 were:

- Building 40 radio sites from April through October.
- The successful use of ALMR radios over a satellite link.
- The formation of the ALMR Users Group to develop the operations and maintenance criteria for the ALMR system.

While the work was going on with the ALMR system construction another of Governor Murkowski's interoperability initiatives was under way. A groundbreaking strategic assessment of integrated emergency management communications for Alaska was completed during 2005.

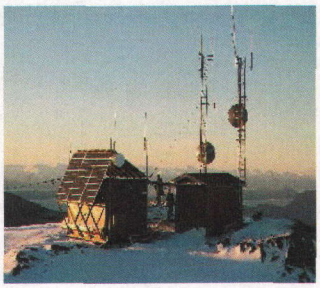
This study reviewed:

- The Alert and Early Warning Systems
- Emergency Communications Systems
- The State-Wide Administrative Communications System

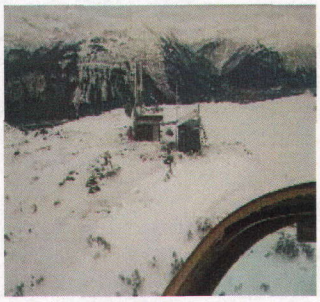
In this context ALMR is an important component that affects emergency communication, command and control.

ALMR is a solid first step in interoperable communications. But there are additional requirements necessary to protect lives and property in Alaska. The first of these initiatives is the deployment of satellite phones to rural and remote areas of the state for emergency communications.

Governor Murkowski is committed to making interoperable communications for first responders in Alaska a reality.



Saddle Mountain-Juneau



Saddle Mountain-Juneau

From The ALMR Program Office-Mike Callahan

The Alaska Land Mobile Radio system has gone through a massive build out during the 2005 construction season. This undertaking has been a collaborative effort among the State of Alaska, the Department of Defense, Motorola and many Alaska subcontractors. At the end of 2005, 54 radio frequency (RF) sites were operational on the ALMR system. These include forty (40) RF sites completed in 2005.

In the process of getting these sites operational, the collaborative effort included:

- Installation of six communication towers from 50 to 120 feet tall
- Installation of 14 microwave hops (new installs and digital up-grades)
- Placement of 13 new 10 x 24 feet communication shelters (3 of which had to be airlifted).

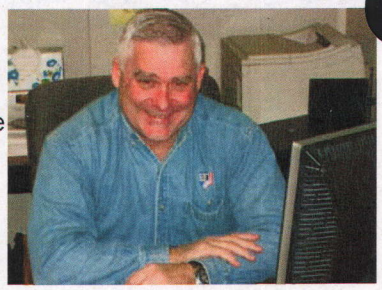
Ten of the remote sites are only accessible by helicopter. The helicopter accessible sites required intense logistical planning and coordination as well as cooperating weather conditions.

Five sites were not built before the end of 2005. Site implementation at these locations was held up by the lengthy process of obtaining land use agreements. The plan, however, is in place to complete the build out of these sites in 2006. The lack of these five sites will have no effect on the ALMR Program Management Office plan to transition the Alaska State Troopers Region D and the Alaska Department of Transportation to ALMR in the Fairbanks/Northern operating area.

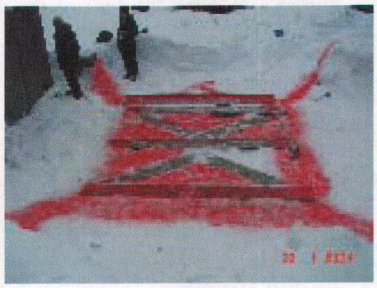
Three of the five sites remaining to be built are located in the northern operating area. One will be placed on the Alaska Highway and two on the Parks Highway north of Talkeetna. There are currently no conventional sites in these three areas. When completed, the ALMR sites are designed to fill existing gaps in coverage.

Meanwhile, new users transitioning to the ALMR system will get the benefit of a state-of-the-art, wide area, two-way radio network that will allow unparalleled day-to-day operations and inter-agency, multi-jurisdictional interoperability.

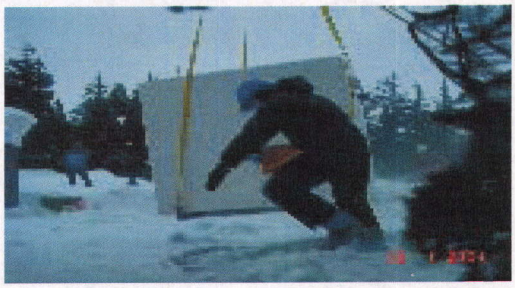
Special thanks to Melissa Marshall, ALMR Project Manager, for this article.

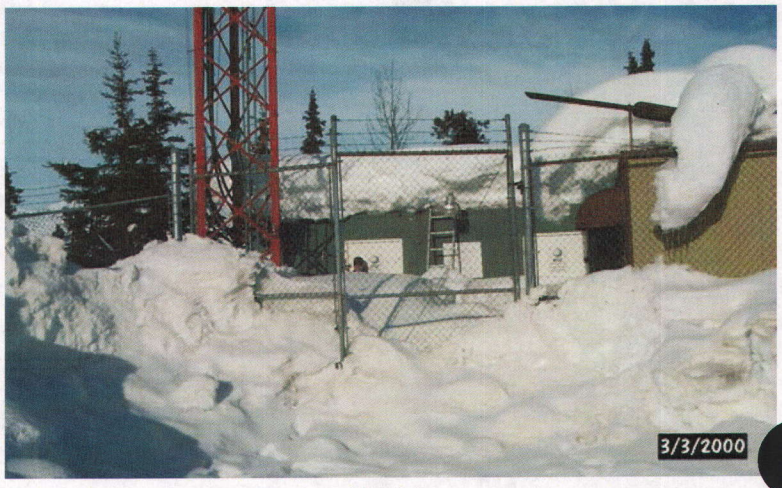


Mike Callahan
ALMR State Program Manager



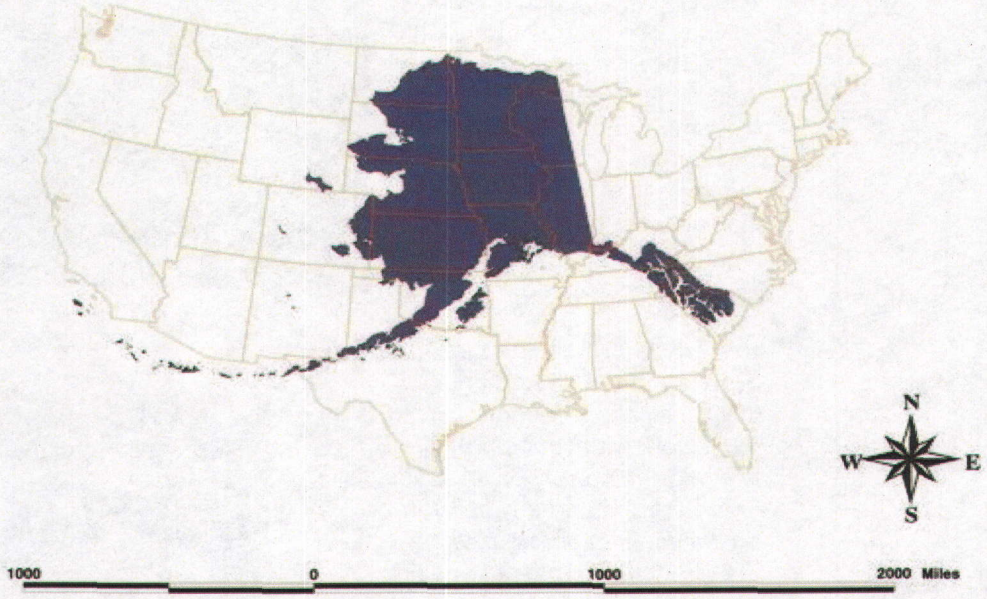
Markings for shelter placement at Silvertip





Honolulu

The Challenge of Interoperable Communications In Alaska



The Challenge:

How do you establish
state-wide, interoperable communications for first responders
at the federal, state and local-levels
in an area that is equal to 20% of the land area in the
adjacent forty-eight states?

Alaska's Land Area: 586,412 Square Miles
Alaska Population: 626,932
Alaska Coast Line: 33,000 Miles
Alaska has fewer miles of road than Delaware

Police officer at St. Paul Island
testing ALMR radio

St. Paul Island? On the map above it is the lower dot in
central New Mexico.

Interoperable Communication Is Happening In Alaska.

Using Radios Around Explosive Materials

If your work may take you into a potentially explosive environment, intrinsically safe radios, batteries, and accessories are the way to go. If that is not the case, a standard VHF P25 trunking radio will allow you to operate safely on the ALMR system and provide more flexibility in maintenance.

Intrinsically safe radios must be used with intrinsically safe batteries and accessories.

There are two classes of portable radios manufactured to comply with Factory Mutual (FM) United States Approvals. These radios are classed as *Intrinsically Safe* (IS) or *Non-Incendive* (NI). This means the radios can be used around flammable gases and vapors, such as those found in petrochemical environments.

Intrinsically Safe radios, under normal or abnormal operating conditions, are incapable of releasing sufficient electrical or thermal energy to cause ignition of a specific hazardous mixture and air. This rating is required for equipment to be used in *Close Proximity* (Division 1) environments.

Non-incendive radios, under normal operating conditions only, are incapable of releasing sufficient electrical or thermal energy which cause ignition of a specific hazardous mixture and air. This rating is required for equipment to be used in *Further Proximity* (Division 2) environments.

Intrinsically safe and non-incendive radios and accessories must be manufactured that way – they cannot be converted from non-intrinsically safe units. Most manufacturers require that only authorized service centers repair IS and NI devices. This may affect servicing choices, timelines and costs.

This article is presented as an overview of the characteristics of intrinsically safe radios. *You must work with your safety office, manufacturer, OSHA, trade organizations and any other industry sources before making the right choice for your specific organization and use.*

Special thanks to Joe Quickel, ALMR Joint Program Office, for this article.

St. Paul Island

Dispatch at St. Paul Island

Ernestine Mountain

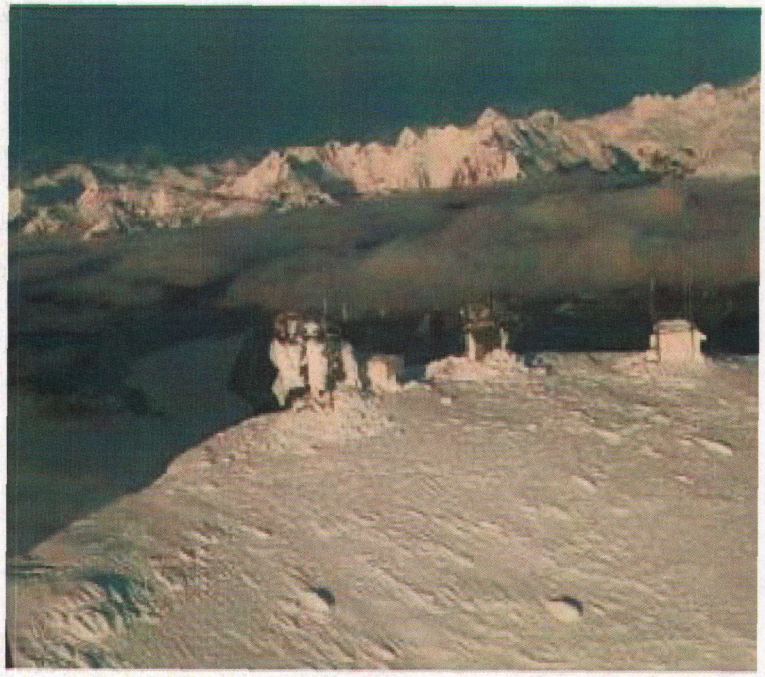
Notes From The Field

ALMR Communications Through a Satellite Link

Connecting rural and remote communities in Alaska to the ALMR systems has been a necessity if it is to be truly a state-wide interoperable communications tool.

In late November of 2005, on remote St. Paul Island, a series of tests were conducted using first responder radios and a polar orbiting satellite to successfully connect into the ALMR system. The technical problem that needed to be overcome was the lag time of the radio signal up and back from the satellite. Previously this lag time had caused the radios to lose contact, like a dropped call on a cell phone.

As a result of the successful tests on St. Paul Island, a viable means of connecting rural and remote Alaska communities into the state-wide emergency communications now exists. This technology can be added as part of future phases of the ALMR system build out.



Heney Range-Cordova

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