ALMR INSIDER

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ALMR Help Desk

In Anchorage: 334-2567

Toll Free within Alaska: 888-334-2567

E-mail: almr-helpdesk @inuitservices.com

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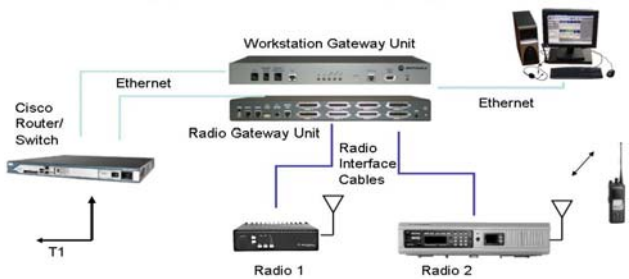
Gateway Connectivity

PROPOSED GATEWAY EQUIPMENT LOCATIONS	
Alyeska Pipeline - Valdez Maritime Security Center	Dead Horse
Delta State Troopers	DNR Parks (tentative)
Eielson Air Force Base	Elmendorf Air Force Base
Enstar Dispatch Center - Anchorage	Fairbanks Emergency Operations Center
Fairbanks State Trooper Dispatch	Fort Greely
Fort Richardson	Fort Wainwright
Glennallen State Troopers	Homer Police Department
Immigration & Customs Enforcement/Border Protection	Juneau Coast Guard
Kodiak Coast Guard	Matanuska Electric
MATCOM	North Slope Borough Fire Department
Seward Coast Guard	Seward Police & Fire Department Dispatch
Site TBD	State Forestry Dispatch
Tok State Trooper Dispatch	Tudor Road
University of Alaska - Fairbanks	Valdez Coast Guard

Typical Site Equipment



In the continuing effort to enhance communications interoperability throughout Alaska, additional Motorola™ MotoBridge© gateway equipment will soon be added to 30 sites in the Alaska Land Mobile Radio (ALMR) Communications System. Currently, the ALMR System has seven MotoBridge© gateway sites located at Tudor Road, Anchorage Emergency Operation Center (EOC), Fairbanks EOC, MATCOM, Saint Paul Island, and one in each of the Transportable Systems.

So what does this mean for the agencies currently on ALMR, and those not on ALMR?

First, let's consider what functions gateways offer. By definition, a gateway is a device that allows a disparate radio to communicate real time, overcoming spectrum, formatting, and other technical challenges. As an example, agencies currently operating on conventional radio equipment technology will be able to talk to agencies on ALMR with prior planning, and appropriate procedures and agreements in place. Other resources such as maritime, air-to-ground, military radios, cellular phone, etc., can all be connected to the gateway as required to facilitate interoperability.

By connecting a disparate donor radio to a Radio Gateway Unit, interoperability is achieved by the public safety dispatch operator bridging the disparate radio to the ALMR user talkgroup(s). The bridge (patch) can be requested by either party following protocols that will need to be

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Gateway Connectivity (continued)

established. These patches are meant to be utilized for non-day-to-day, short duration, incident specific radio traffic. The donor radio agency will only be able to access the ALMR system within their normal coverage area, whereas the ALMR users could access the donor radio agency from anywhere in the State where ALMR coverage exists. When completed, the Alaska gateway system will closely resemble active systems in Florida and Georgia.

More information can be found http://www.dms.myflorida.com/cits/public_safety/radio_communications/florida_interoperability_network_fin.

The consulting firm, 5 Star Team, has been contracted to implement the ALMR Gateway Concept of Operations (CONOPS) and develop standard naming conventions and operational protocols. They will also be traveling to areas around the state to provide an overview of the gateway project and CONOPS implementation. 5 Star Team will also verify what disparate agencies have been identified and if the need for MotoBridge© connectivity still exists, or if there is a need at locations not included in the current project.

Each location will require some site preparation (space, electric, HVAC, grounding, etc.) to accommodate the new equipment. The DOD and SOA Project Managers will work with each agency where equipment is being implemented to establish a Memorandum of Agreement and FCC Part 90 Spectrum Sharing Agreements, as required.

The DOD has contracted for some user agency MotoBridge© training. The Administrative, Operational and Technical training availability and schedule have yet to be coordinated at the time of this printing. Locations/agencies receiving the gateway equipment will be notified of training opportunities and availability.

The Motorola™ implementation schedule has not been released to date.

Rivada Networks© Presentation

On January 24, 2008, Rivada Networks© gave a presentation on their Interoperable Communications Extension System (ICE-S). The ICE-S is a portable, interoperable cellular telephone technology solution that can replace or enhance existing cellular coverage, or operate as a standalone system. It encompasses cellular, satellite, internet protocol (IP), and land mobile radio (LMR) based technologies. It has an integrated satellite system for reach back connectivity and a gateway for LMR interoperability. The Rivada cellular system is similar to the Cellular on Wheels (COW) that many of cellular carriers have in case of tower failure, destruction, or to enhance channel capability.

The ICE-S is equipped with its own mobile communications devices (MCDs; aka cell phones) and personal digital assistants (PDAs). The quantities of each may vary. The devices operate on both commercial systems and the ICE-S. However, commercially purchased personal cell phones will not work on the ICE-S unless pre-programmed into the ICE-S. Prior to an incident, individuals deploying with the ICE-S may have MCDs issued to them for day-to-day duties to ensure familiarity and immediate availability of use when they arrive at an incident.

Even though the ICE-S can fill a gap in commercial cellular service, it will not provide service to the general public. The coverage is limited by antenna height and the surrounding terrain. The maximum range on flat terrain is estimated at 5 to 10 miles. In a major catastrophic event, this would be a limiting factor for interoperable communications. This type of system might be best suited for localized incidents.

Current Agencies Operating on ALMR

Alaska Defense Force
Anderson VFD & EMS
Alaska Fire Service
Alaska State Troopers
ATF
Bear Creek Fire Service Area
Cantwell VFD
Chena Goldstream FD
Civil Air Patrol
City of Fairbanks
City of Seward
Clear AFS
Cooper Landing Emergency Services
Customs & Border Protection
Delta Junction VFD
Delta Rescue VFD
DEA
DEC
DOT
Eielson AFB
Elmendorf AFB
Ester VFD
Fairbanks North Star Borough
FBI
Federal Protective Service
Homer PD
Hope/Sunrise EMS & FD
Houston PD
Houston FD
IRS
Kenai PD
Kulis ANGB
Mat-Su Borough
Mat-Su Regional Medical Center
McKinley VFD
Moose Pass Fire EMS
NOAA
National Park Service-Alaska Region
North Pole PD
Palmer City PD
Providence Seward Medical & Care Center
Rural Deltana VFD
Salcha Rescue
Seward Vol Ambulance
Soldotna PD

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Agencies (cont)

Steese VFD
Tok Area EMS
Tri-Valley VFD
UAF PD
US Army Alaska
US Fish & Wildlife Service
US Forest Service - Law Enforcement & Investigations
US Marshals
Valdez FD
Valdez PD
Wasilla PD

Security Update

Information Assurance (IA) is the practice of managing information-related risks. More specifically, IA works to protect the confidentiality, integrity, and availability of data and data delivery systems.

One very important IA practice is educating all system users about the potential IA-related risks of a system, and how to prevent an IA-related issue.

To fulfill all ALMR user agencies IA-related requirements, the ALMR System Management Office (SMO) is implementing a required IA training program.

All users who possess user credentials on the ALMR network will be required to complete web-based IA training courses.

These brief courses will instruct users on how to recognize and respond to IA-related issues like computer viruses, social engineering, inappropriate use, etc.

The ALMR IA Training Program is scheduled for release in May 2008.

The SMO will disseminate additional information shortly to at all LMR user agencies.

State of Alaska: Frequency Deconfliction Update

Critical to the transition of the build out of ALMR sites is the task of eliminating frequency conflicts. Over the past several years, the build out has generated frequency conflicts in several areas with the pre-existing legacy radio system operated and still used by various State of Alaska (SOA) agencies. Until these frequency conflicts are resolved, some ALMR sites will continue to operate at reduced available channel capacity.

In the Fairbanks area, the SOA has developed plans to re-license and change frequencies for SOA legacy system users at the Fairbanks International Airport (FAI), Fairbanks Youth Facility (FYF), as well as multiple local fire departments using the Harding Lake site. Temporary relocation of radio equipment at FAI is also required until facility remodeling is completed in early 2009. FYF deconfliction will require repeater replacement. License modification requests have been submitted to the Federal Communications Commission (FCC) and resolution of Fairbanks area confliction issues should be completed this summer.

ALMR Alcantra, Bailey Hill, and Quarry Hill conflictions generated by Department of Corrections legacy radio use is also being addressed. A standard frequency plan has been agreed upon, and FCC requests are in the process of submission. Repeater retuning and plans for some handheld and mobile radio replacements are currently being scheduled.

EMS repeaters on the Kenai Peninsula currently conflicting with the Cooper Mountain and Hope ALMR sites are scheduled to be tuned to a new EMS frequency identified for statewide use. FCC licensing approval has been initiated.

Submitted by:
Mr. Jim Kohler, ETS
ALMR Program Manager

Users Make or Break Every System

Digital trunked radio (DTR) systems are more complex than the conventional systems they replace. It is critical to provide adequate training and standardized procedures to transitioning users. Without pre-planning, difficulties occur and affect the success and perception of the system.

Should this cause undue concern with regard to the implementation of ALMR? No; the architecture of ALMR is such that many of the specific issues experienced in other systems have been addressed, and certainly ALMR redundancy is among the best in the public safety arena. What we do need to be sensitive to is the management of our users' expectations by ensuring each user fully understands the significant differences from conventional analog radio; continuing to work carefully with the users to ensure a full realization of the advantages of trunking; avoiding workarounds that sacrifice these advantages; and ensuring training is properly focused. Basically, educate the users. Just as radio dispatch changed the face of Public Safety in the last millennium, a full realization of all the benefits of DTR may require some major face lifts in how business is done.

While DTR is still PTT, the similarity with conventional analog stops immediately after a finger keys the mic. The User Council can help by providing a framework as the foundation for each local area to craft their own training plan, and by facilitating cross talk to share the wealth between agencies on the System.

If you improve a user's experience by "managing" their expectations through training and collaborative efforts to develop new procedures that leverage the advantages, you will help mitigate their setbacks as they transition to DTR.

Submitted by: Mr. Randy Henderson, AML-Central Representative

Site vs. Wide Area Trunking: What's the difference?

A commonly asked question at the ALMR Help Desk is the difference between site trunking and wide area trunking.

Basically, wide area trunking is when the System is operating in the preferred, designed mode and calls are processed by the Zone Controller System wide. When in site trunking, the connection from the site(s) to the Zone Controller is broken/interrupted, and the local controller at the site processes the calls independent of the ALMR System and its associated access database.

Users on a site in the site trunking mode will only be able to communicate with other users affiliated to the same site. If several sites revert to site trunking, each site will operate independently of the others. Console calls and functions are processed in the Zone Controller, and therefore will not communicate with other sites in site trunking. Some of these console features include: patches, private call, call alert and multi-select.

Because the Zone Controller processes all data calls, OTAR and data calls cannot be processed during site trunking.
Agencies should develop their own policies and procedures for responding to events should the site(s) they normally use go into site trunking.

Agencies should consider what level of notification they want the radio to provide when a site goes into site trunking mode when programming radios. All radios currently on ALMR have the capability to provide a text display and/or audio alert, or no notification of site trunking.

Please contact the ALMR Help Desk for technical recommendations that may work for your agency.

Help Desk In Anchorage Bowl: 334-2567

Toll Free within Alaska: 888-334-2567

Fax: 907-269-6797

Email: almr-helpdesk@inuitservices.com

Website: http://www.ak-prepared.com/almr/

Photo of Reindeer Hills taken on August 21, 2007. The ARRC building houses Department of Defense - US Army Alaska equipment, and is located on the Parks Highway between Talkeetna and Clear.

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