



Alaska Land Mobile Radio Communication System

Strategic and Operational Plan

Version 4

NOTE: For State FY2011 optional training services were not funded (grayed out) and are not provided at this time.

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Definitions and Acronyms

Alaska Federal Executive Association (AFEA): federal government entities, agencies and organizations, other than the Department of Defense, that will operate on the shared ALMR system infrastructure.

Alaska Land Mobile Radio (ALMR) Communications System: the ALMR Communications System, which uses but is separate from the State of Alaska Telecommunications System (SATS), as established in the Cooperative Agreement.

Alaska Municipal League: a voluntary non-profit organization in Alaska that represents member local governments.

Anchorage Wide Area Radio Network (AWARN): The 700 MHz Anchorage node of ALMR. AWARN makes up Zone 4 of the System.

Cooperative Agreement: the instrument that establishes ALMR and sets out the terms and conditions by which the System will be governed, managed, operated and modified by the Parties signing the Agreement.

Communications Unit Leader (COML): the individual that assigns frequencies or talk groups to the various user groups during an incident.

Department of Defense – Alaska: Alaskan Command, US Air Force and US Army component services operating under United States Pacific Command.

Executive Council: the ALMR Executive Council which is made up of three voting members and two associate members representing the original four constituency groups: the State of Alaska, the Department of Defense, Non-DOD Federal agencies (represented by the Alaska Federal Executive Association), and local municipal/government (represented by the Alaska Municipal League and the Municipality of Anchorage).

Federal Communications Commission (FCC): For the purposes of ALMR, the Federal level governing body that approves the use of commercial, maritime, state, local and other agencies that are not a part of the Department of Defense or other Federal agencies radio frequency spectrum through the issuance of radio station authorizations once coordination with all potentially affected agencies has been completed. The approvals will in most cases (exceptions might be waivers or special temporary authority) be for use of a particular portion of a frequency band that has been pre-authorized through the frequency band table of allocations. In addition, the FCC maintains the communications tower registration program.

Interoperable Communications: the ability of public safety, including emergency and other first responders, to talk to one another via radio and other communication systems, and to exchange voice and/or data with one another on demand in real time.

ICTAP: Interoperable Communications Technical Assistance Program.

IP: Internet Protocol

Joint Project Team: consists of a diverse group of individuals from multiple organizations who work to achieve common project objectives and deliverables.

LMR: Land Mobile Radio

MHz: Megahertz

Municipality of Anchorage (MOA): the MOA covers 1,951 square miles with a population of approximately 278,000. The MOA stretches from Portage, at the southern border, to the Knik River at the northern border, and encompasses the communities of Girdwood, Indian, Anchorage, Eagle River, Chugiak/Birchwood, and the native village of Eklutna.

National Incident Management System (NIMS): a unified approach to incident management, standard command, and management structures with emphasis on preparedness, mutual aid, and resource management.

Operations Manager: the Operations Manager represents the User Council interests and makes decisions on issues related to the day-to-day operation of the system and any urgent or emergency system operational or repair decisions. In coordination with the User Council, the Operations Manager establishes policies, procedures, contracts, organizations, and agreements that provide the service levels as defined in the ALMR Service Level Agreement.

Operations Management Office (OMO): develops recommendations for policies, procedures, and guidelines; identifies technologies and standards; and coordinates intergovernmental resources to facilitate communications interoperability with emphasis on improving public safety and emergency response communications.

P25 Radio: a Project 25 compliant control station, console, mobile or portable radio assigned to the System that has a unique identification number.

P25 Standards: the P25 suite of standards involves digital Land Mobile Radio (LMR) services for local, state and national (federal) public safety organizations and agencies. P25 is applicable to land mobile radio (LMR) equipment authorized or licensed, in the U.S., under the National Telecommunications and Information Administration (NTIA) or Federal Communications Commission (FCC) rules and regulations.

Protocol: a standard that governs network communications by providing a set of rules for its operation.

RF: Radio Frequency

SME: Subject Matter Expert

Standard Operating Procedure (SOP): includes work flow diagrams, roles and responsibilities, etc. to clearly define work procedures.

State of Alaska (SOA): the primary maintainer of the SATS (the State's microwave system), and shared owner of the System.

State of Alaska Telecommunications Systems (SATS): the State of Alaska statewide telecommunications system microwave network.

System Management Office (SMO): the team of specialists responsible for management of maintenance and operations of the System.

Talk group: the electronic equivalent of a channel on a trunked system; a unique group of radio Users that can communicate with each other.

UHF: Ultra-high frequency

User/Member: an agency, person, group, organization or other entity which has an existing written Membership Agreement with one of the Parties to the Agreement. The terms user and member are synonymous and interchangeable.

User Council: the User Council is responsible for recommending all operational and maintenance decisions affecting the System. Under the direction and supervision of the Executive Council, the User Council has the responsibility for management oversight and operation of the System. The User Council oversees the development of System operations plans, procedures and policies under the direction and guidance of the Executive Council.

VHF: Very-high frequency

1.0 Introduction

1.1 Purpose

Strategic and operational planning is the process of comprehensive, integrated program planning that considers, at a minimum, the future of current decisions, overall policy, organizational development, and their links to fulfilling successful daily operations.

The purpose of this plan is to determine the how, when, and where the Alaska Land Mobile Radio (ALMR) Communications System will be going over the next year and what support to expect from the Operations Management Office (OMO). To ensure that ALMR continues to provide high-quality, standards-based, interoperable communications for its users, it is essential that there be a proactive OMO Strategic and Operational Plan that recognizes the many challenges facing the organization in both the short- and long-term. Strategies and operational processes must be developed, implemented, sustained, and modified that identify and capitalize on the unique strengths and contributions of all the ALMR stakeholders.

This document is not intended to be all-inclusive and will evolve as conditions, management controls, processes, and procedures dictate.

Common themes for achieving both strategic and operational successes are identified as:

- Create a common understanding of communications interoperability throughout the State and establish it as a high priority
- Provide leadership in the development of policies and guidelines that support the Statewide Interoperable Communications Plan for Alaska
- Promote and maintain collaborative partnerships to maximize existing, and future, interoperable communications equipment, systems, and resources
- Establish and follow coordinated communication protocols for emergency response and utilize plain/common language to the fullest extent
- Maximize interoperability capabilities by using existing communications systems and equipment, while planning for the implementation of selected and future technologies
- Plan for the implementation of selected future System upgrade/refresh technologies
- Enhance user knowledge and proper use of ALMR

2.0 Roles and Responsibilities

2.1 Executive Council

Their responsibilities as defined in the Executive Council Charter, include developing a set of System requirements and a migration plan to transition from all the aging

communication systems in use to a single, shared, wide-area trunked radio system. A critical requirement in the development of the new System was ensuring the ability for Public Safety responders to transition seamlessly. To meet the listed goals, the EC decided upon a cost-shared, Project 25/TIA-102, trunked LMR communications system.

2.2 User Council

The authority for the creation and operation of the User Council (UC) is derived from Article IX of the ALMR Cooperative Agreement. The UC functions under the rule of governance contained in the Cooperative Agreement and also under the guidance and oversight of the EC.

The User Council, in cooperation and coordination with the Operations Manager, will provide guidance and operational oversight of the System.

2.3 Operations Management Office

The Operations Management Office (OMO) works with the EC, UC, and stakeholders, and acts as their single point of contact, for all ALMR-related issues and requests. The OMO ensures that the day-to-day operation and maintenance of the System is performed to the agreed upon levels in the SLA, and documents all areas of non-compliance.

In addition, OMO provides oversight of the System Management Office, as well as lateral coordination with the contracted maintenance entity and the SOA ETS.

3.0 Approach

Strategic planning reflects discussions and ideas regarding how to create a vigorous operations management approach for all ALMR operational functions. Mandates, environmental factors, challenges, opportunities, and strategic issues identified by stakeholders have been considered. The following roles and responsibilities address pertinent areas regarding ALMR activities, which are further referenced in the High Level Strategy and High Level Communications Strategy.

- Strategic planning
- Operations management
- Maintenance oversight
- System management oversight
- Information management oversight
- Outreach and education
- Finance and budget
- Quality control/risk management
- Internal/external communications
- Administrative activities

- Statewide Interoperability Plan

3.1 Critical Issues

Building blocks for developing the mission statement, short- and long-term visions, strategy, values, and planning goals for ALMR and its stakeholders are:

- Eliminating duplication of efforts (maximize resource sharing through partnerships)
- Validation of the need for functional guidelines (operational and technical) to provide city, borough, regional, and State communications interoperability through Incident Command common use talk groups
- Leveraging limited funding for System enhancements through an assessment and “buy-in” approval process
- Recognizing time criticality (natural/technological hazards, terrorism, etc.)

3.2 Framework

Once high-level strategic goals have been established, the next step is to identify an annual planning cycle that provides a means to measure successes, setbacks, and areas that require improvement.

The final step would be to develop the framework for strategic and operational implementation of established goals.

The framework reflects previous discussions and also builds on the successes that ALMR has already achieved. It is expanded through the mission and vision statements, values, and strategic goals required for continued ALMR success.

4.0 Planning Lifecycle

The developed annual strategic and operations planning lifecycle implements and measures the success of this plan. The lifecycle consists of four stages: Planning; Buy-In; Implementation; and Assess and Measure.

4.1 Planning

During the planning stage, the Strategic and Operational Plan is updated and enhanced by the OMO.

Recommendations from the previous year and the current environment are considered to:

- Add new initiatives to be accomplished in the upcoming year
- Update and carry over incremental initiatives from the previous year that are still relevant
- Remove initiatives that have been completed

- Add new information to provide stakeholders with the most up-to-date information on status of ALMR operations, maintenance, system enhancements and communications interoperability within Alaska
- Send the updated plan to the UC for consideration and approval, and another year of implementation begins

4.2 Buy-in

Once committee recommendations are approved and a course of action is determined, the process of achieving “Buy In” from all necessary stakeholders on the local, regional, State, and Federal levels begins. This is accomplished through information sharing, collaborative sessions, and briefings. Periodic follow-up with stakeholders is recommended to ensure continuity and continued "Buy In."

4.3 Implementation

This is the longest stage of the planned lifecycle and requires stakeholders to bring expertise and experience together in order to achieve established initiatives.

Key activities include:

- Identifying working committees to assist in the achievement of initiatives
- Developing a roadmap and project plan for presenting recommendations in order to move towards “Implementation” of desired initiatives
- Convening the governance groups (UC and EC) to review progress of initiatives and recommendations

As new recommendations are made, or priorities change, during the “Implementation” stage, and subsequently accepted by the members of the governance structure, they move towards completion of the “Buy-In” stage. Initiatives not approved, or requiring additional work for acceptance, remain in the “Implementation” stage to measure and plan for in the following calendar year. Complex initiatives may take multiple years to achieve completion of “Buy-In,” while others may be institutionalized more quickly.

4.4 Assess and Measure

Performance should be measured annually for both short- and long-term outcomes.

This requires:

- Maintenance of a baseline inventory of ALMR equipment, frequencies, emergency plans, and tactical interoperable communication plans
- Soliciting input from stakeholders on current goals
- Analyzing the performance against the established criteria
- Developing an annual report that shows progress, setbacks, and areas that require improvement

5.0 Communications

The communications strategy encourages all internal and external stakeholders to recognize their roles. By establishing a reasonable communications methodology with obtainable goals and objectives, OMO develops external relationships and improves the culture of the organization.

5.1 Methodology

The communications strategy is comprised of five steps.

- Identify the audience
- Analyze the needs of each stakeholder
- Identify communications channels
- Determine what information is to be provided
- Develop an on-going dissemination avenue for information

5.2 Mechanisms Employed

Mechanisms employed are addressed in the High Level Communications Strategy.

5.3 External Communications

The focus of external communications is to raise the regional, statewide, and national profile of the ALMR System and the OMO, as well as improving its image and identity using appropriate communications mechanisms. Specific goals and objectives are addressed in the High Level Communications Strategy.

5.4 Internal Communications

The focus of internal communications is open dialogue between all levels of the organization. The key element of internal communications is continuous dialogue between the agencies. Dialogue cannot be delegated to just one individual; all participants must maintain clear and open channels of communication and information sharing within the ALMR organizational structure. Specific goals and objectives are addressed in the High Level Communications Strategy.

6.0 Governance

A successful interoperability plan requires leadership participation among all levels. An established governance structure ensures key stakeholders have an on-going role in the planning, design, implementation and maintenance of communications interoperability.

In addition, local public safety practitioners are the primary users of the communications system and therefore, they need to be involved from inception through implementation.

The purpose of creating any governance structure is to ensure that key stakeholders have an ongoing role in the planning, design, implementation and maintenance of communications interoperability. Case examples illustrate that by enrolling a majority of local representatives on the leadership team, states establish trust at the local level which, in turn, eases barriers to cooperation and implementation. Governance structures that incorporate a participatory, inclusive, and a locally-driven approach toward decision making find success in the Implementation phase of a statewide system.

ALMR applies a consortium approach and operates as a cooperative effort of the Department of Defense, Federal Non-DOD agencies, the State of Alaska, and local agencies. Oversight of the entire System is provided by the Executive Council. Operations and maintenance decisions are delegated to the User Council, which is made up of members representing each of the four cooperative partners.

7.0 Action Plan

In developing an action plan, ALMR operations take into account the internal support structure, as well as the lateral relationship with the SOA.

Operational activities are divided into seven major topics.

- Strategic operations and policy
- Budget development
- Documentation
- Daily operations
- Technical operations
- Outreach and education
- Quality Assurance/Quality Control

8.0 Priority Issues and Strategic Goals

8.1 Priority Issues

Although there are always operational tasks that need to be accomplished, it is necessary to prioritize those areas that require immediate attention. These are ranked by their importance to the operation of the System and are essential to establishing an effective operations organization.

These are currently deemed as priority issues and must continue to receive urgent attention.

- Maintaining the OMO as a viable organization that the EC, UC, and stakeholders utilize for their ALMR-related issues/requests

- Working with the EC, UC, and stakeholders to develop a fair and equitable Cost Share Agreement that allows agencies to budget future ALMR expenditures, and also allows potential new users to address financial expenditures
- Continuing to work with the EC, UC, and stakeholders to develop and execute maintenance agreements that ensure standards that meet SLA requirements are defined and met
- Continuing to demonstrate to existing System users the value of ALMR in meeting their day-to-day communications requirements
- Promoting and encourage potential new users to come onto the System

8.2 Strategic Goals

The following list of strategic goals, as presented and expanded in the High Level Strategy, takes into account the Performance-based Work Statement, available organizational resources, and the implementation of management controls.

- Foster innovation and creativity
- Institutional excellence
- Leadership
- Stakeholder service
- Foster partnerships
- Technical expertise
- Enhance ALMR
- System Reliability
- Outreach and education
- Cost share consensus
- Operations services
- Institutional controls
- Information management
- Risk management

9.0 Initiatives

To update the Strategic and Operational Plan and incorporate new operational initiatives for CY2011, the OMO worked with the UC to finalize the areas of consideration. The following 2011 initiatives were derived from current work and projects occurring within OMO and other stakeholder work.

Each initiative is a stepping stone towards achieving one or more of the OMO strategic goals (Section 8.2) and is grouped into four categories.

- Outreach
- Governance
- Technology
- Operations Training

9.1 Outreach

Outreach initiatives are intended to bring interoperability information to Alaska practitioners, elected officials, and other stakeholders. They focus on development of standardized materials, maintaining and updating the web site, providing information on grants and other possible funding assistance, and disseminating technical information throughout the user community.

9.1.1 Develop, distribute, and promote interoperable communications information to stakeholders.

- Plan and conduct an annual Alaska Interoperable Communications Conference (i.e. Annual User Council Conference)
- Update and maintain the web site and promote a resource library of local, State, and Federal interoperable communications information
- Provide web links to national initiatives such as Project 25 (P25) and NIMS
- Communicate information about grant writing training and assistance
- Promote the Interoperability Communications Technical Assistance Program (ICTAP)

9.1.2 Communicate the importance of continued existence of the System.

- Provide and distribute interoperable communications newsletters
- Attend workshops, seminars, and other public gathering forums to promote use of the System
- Assist new users with transition process
- Keep current users well informed on system expansions, upgrades, and enhancements

9.2 Governance

Governance initiatives foster, maintain, and enhance the interoperability effort in Alaska by involving an increased number of practitioners in the process.

9.2.1 Sustain the interoperability effort.

- Collaborate to develop and gain approval of a long-term strategy to maintain Alaska's interoperability effort
- Collaborate in the development of, and gain approval for, a statewide investment plan for interoperable communications
- Utilize budget processes to identify opportunities to transition from grant funding to general fund support
- Provide an annual ALMR interoperable communications update to the Governor, Alaska Legislature, the DOD, and local government officials

9.2.2 Support existing governance structure and all interoperability coordinating organizations.

- Ensure appropriate representation on the UC by all major stakeholders

- Provide additional collaborative forums to discuss regional issues

9.3 Technology

Technology initiatives allow for the coordination of major asset investments that increase the ability of practitioners to respond to major emergencies. In addition, the initiatives identify technological gaps within the different regions of Alaska.

Technology development continues through:

- Integration of MotoBridge® gateways at xx locations into the ALMR infrastructure
- Review of the potential expansion capabilities
- System technology refresh upgrades

9.4 Operations

Operational initiatives help overcome operations and institutional barriers to improve user communications for day-to-day, as well as major emergency situations.

9.4.1 Promote approved Regional Incident Command common-use talkgroups.

9.4.2 Update, gain approval of, and execute the necessary shared-use agreements for the System.

- User
- Maintenance
- Site cooperative use
- Cost share

9.4.3 Update, and gain approval of, interoperable communications documentation.

- Refine transportable communications system checklists and deployment, operations, and re-deployment procedures
- Review and update plans, policies and procedures on an annual basis, or as needed

9.4.4 Encourage adoption of a plain/common language best practices protocol for local, State, and Federal LMR users.

9.4.5 Identify and promote the use of nationally recognized Federal Communications Commission (FCC) designated interoperability channels that can be used within Alaska.

9.5 Training

Training initiatives provide and exercise a standardized definition of interoperability and help all levels of government practice and improve upon localized procedures, as well as the escalation process of incident management.

9.5.1 Plan for, participate in, and provide interoperable communications support exercises.

9.5.2 Endorse the Communications Unit Leader (COML) concept and encourage NIMS certification within Alaska.

- Monitor COML curriculum development at the Federal level
- Encourage completion of IS100 and IS700 NIMS training

10.0 Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

An important step in responding to the rapidly changing environment facing ALMR and the OMO is developing an understanding of the external and internal context within which both operate. This involves an analysis of the strengths, weaknesses, opportunities, and threats. This list is by no means all inclusive. However, it provides a useful snapshot in time for the on-going development and refinement of the strategic planning framework. Key items are:

10.1 Strengths

- Wide-area presence
- Interoperability provided to public safety first responders
- Incident command structure zones programmed in the radios
- P25 standards-based system allows multiple vendors
- Increasing number of users
- Quality Federal, State, and local involvement
- Two geographically separated transportable units capable of establishing communications within most Alaska locations in the event of catastrophic disaster
- Future expansion of coverage along the Alaskan Highway system; continued expansion of the System to Southeast Alaska
- In-building, and tunnel communications
- Strong governance structure

10.2 Weaknesses

- Lack of coordination efforts by partners and System users
- Limited trunking channel availability outside major population areas
- Remaining frequency confliction caused by old conventional systems utilizing frequencies on the ALMR System
- System busies caused by remaining frequency conflictions
- Harsh Alaskan environment; inability to travel to some remote mountain sites due to weather conditions
- Limited User Council participation

10.3 Opportunities

- System ability to accommodate new user agencies
- Cost savings over legacy conventional radio equipment and systems
- System expansion capability
- Mechanism to strengthen partnerships
- Increased training and exercise opportunities
- Ability to re-write/improve plans and procedures for daily use and integration into major incidents

10.4 Threats

- Failure to arrive at a final cost-share agreement for O&M
- Pullout of key stakeholders due to changing communications requirements/missions
- Lack of concern from policy makers, and the general public, to the needs of public safety first responders
- Failure to keep System current with required technology refresh upgrades
- Ability to obtain I funding to complete System build-out
- Failure of key stakeholders to identify critical infrastructure and implement proper in-building solutions to ensure adequate coverage
- Grant funding guidance and rules for expenditure too restrictive for some communities
- Natural disasters and man-caused destruction of infrastructure

11.0 Conclusion

The User Council is responsible for the formal approval of the Strategic and Operational Plan, and any revisions hereafter.