A FEDERAL, STATE AND MUNICIPAL PARTNERSHIP

Alaska Land Mobile Radio Communications System

User Council 2013 Annual Assessment on System Operations and Management Performance

January 29, 2014

1.0 Introduction

Per the Alaska Land Mobile Radio (ALMR) Communications System Cooperative Agreement, Article 8 - User Council, Section 16.2, Performance Monitoring.

> The User Council will monitor and evaluate the performance of the System, including the efficiency and effectiveness of its operation and management, as well as the performance of contracts and user agreements. The User Council will report to the Executive Council their assessment of the operational health of the System annually, or as requested by the Executive Council.

This report provides a high-level overview of ALMR System performance monitoring by the User Council (UC) and their oversight of the day-to-day Operations and System Management functions.

2.0 Membership

At the beginning of 2013, there were 116 agencies operating on ALMR. At the end of the year, the total had increased to 119 agencies ending the year with 18,988 subscriber units in service. New member agencies joining in 2013 were the Ouzinkie Department of Public Safety, Ninilchik Emergency Services, and DHSS Division of Public Health-Section of Emergency Programs

3.0 Metrics

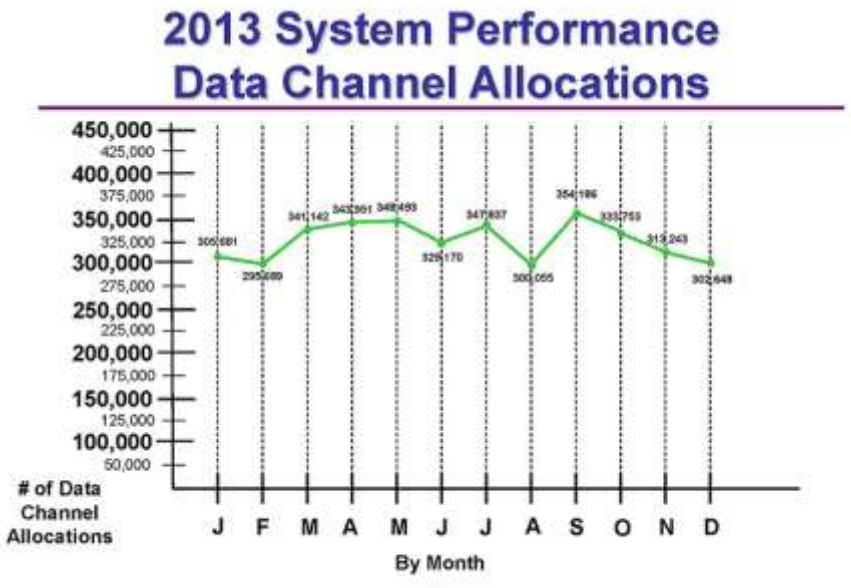
The UC is responsible for monitoring System performance and tracking various parameters including busies and voice calls per month in order to note any trends that may indicate System deficiencies. To accomplish this, they employ the Operations Management Office (OMO) to provide periodic reports. The OMO presents ALMR System metrics at the monthly UC meeting and also at the Executive Council (EC) meetings, as scheduled.

The UC has established a performance baseline standard, with respect to System busies, which identifies day-to-day and emergency operations data for individual sites by both the percentage and duration. When sites exceed established standards, reviews are conducted to determine whether they are related to State of Alaska (SOA) Telecommunications System (SATS) downtime, military exercises, weather-related events or a specific emergency response event.

The OMO provides monthly statistics to the UC to determine whether those sites exceeding the standard are experiencing excessive traffic due to normal seasonal traffic, or if there is simply insufficient channel capacity at the site to handle daily operations.

The following charts examine the total numbers of System voice calls and data allocations per month.

1



2

In 2013, the ALMR System supported a cumulative total of 12,778,142 voice calls and 3,915,848 data allocations.

4.0 Conflictions/De-conflictions

There is currently one known frequency conflict involving ALMR sites.

- Confliction:
  - FS12 (frequency conflict with MOA)

5.0 Build out

The ALMR System was originally designed to support 105 sites. The Atwood 800MHz site was added, as well as the two Transportable Communications Systems. At the end of 2013, site equipment ownership was as follows (original design number and current build-out status/ownership):

- US Army Alaska (USARAK) – 45/4
- Joint Base Elmendorf-Richardson – 1/1
- Eielson Air Force Base – 3/3
- Municipality of Anchorage (MOA) – 15/12
- SOA – 40/75

There are currently 95 operational sites including the 12 MOA Anchorage Wide Area Radio Network (AWARN) sites. All Department of Defense (DOD) sites have been completed and the State has completed the build out of all funded sites.

NOTE 1: In calendar year 2012, radio frequency (RF) equipment belonging to USARAK at 41 sites was transferred to the State of Alaska. This accounts for the difference in the listed numbers for the planned site build out and the current number of owned sites.

NOTE 2: St Paul Island is not included in the above total operational site count due to the fact it has no reach back capability to the rest of the ALMR System and operates only in site trunking mode. However, it does have an assigned ALMR site number and is under control of St Paul Island Public Safety.

NOTE 3: The Clear site was shut down on April 1, 2013, and the equipment was removed. Disposition/relocation of the equipment is still pending.

6.0 System Coverage Issues

ALMR was originally designed and built to provide coverage along the major roadway system in Central and South Central Alaska, major population centers in Southeast Alaska, and some portions of the Marine Highway.
During 2013, several previously identified coverage issues continue to be tracked by the OMO.

- **Skagway** (carried forward from 2010)
  The ALMR site at Skagway does not provide coverage over the last six miles of the Klondike Highway. This is the section that is most intensively maintained, and the area where whiteouts, blowing snow, and avalanches occur. When maintenance crews are in these areas, they utilize the DOT conventional frequency for communications. This frequency often receives radio traffic of civilian truckers on the highway.

  DOT has suggested that an ALMR repeater be installed on Mine Mountain. This would cover the portion of the highway that currently has no ALMR coverage. However, Mine Mountain is remote and does not have power. The DOT&PF planning section offered to assist with funding, if a plan can be put together.

  NOTE: There was no change to the status for this item in 2013.

- **Houston** (carried forward from 2010)
  The Technical Advisor traveled to the Houston area to investigate an issue with poor portable coverage reported by Houston PD. One of the immediate problems noted was that the radios did not have a "most preferred" tower site programmed. During the coverage checks in the Houston area, the only tower sites that were accessible were Site Summit, Cottonwood, and Rabbit Creek. Of the three, Site Summit provides the best site coverage for the affected area. It was suggested that when the agency programs their radios, they should consider making Site Summit the "most preferred' site.

  The System Manager noted that there had been some discussion about a new tower site along the Knik Goose Bay Road in Wasilla. There is an existing tower in the area that could provide excellent coverage throughout the Houston area. However, it may take several years to add an additional radio site if/when funding is approved.

  Subsequently, the only option available at this time, which could improve Houston PD portable radio coverage in the near future, would be for them to

acquire/install in-vehicle repeaters. It was suggested they contact Soldotna PD, who had installed several in their police vehicles and were reportedly satisfied with the improved reception capability.

NOTE: The City of Houston deactivated the Police Department in 2011 and is no longer a member of the ALMR System. There was no change in the status for this item in 2013.

- **Palmer/Wasilla** (carried forward from 2009)
  In September 2009, the OMO conducted coverage tests in the Wasilla area as a follow-up to reported issues from the Wasilla PD. At that time, there were limited areas where coverage issues were experienced.

  One item of particular attention was that the Cottonwood site was not being affiliated to by the agency as much as it should have been. Given that the site is in the middle of Wasilla, it should be most preferred 90 percent of the time. The issue was passed on to the System Management Office (SMO) and they did identify some areas that had a high bit error rate on the Parks Highway on the south side of Wasilla.

  In order to improve coverage, the ALMR technician worked with ETS personnel to relocate the antennas to another side of the Cottonwood tower. Subsequently, this action did improve the coverage along the Parks Highway. The SMO contacted Wasilla PD to see if this resolved the issue. The SMO was advised there were still other outstanding issues.

  The technician then worked with Wasilla PD to update their firmware version, which provided for a stronger signal roaming capability. At this time, Wasilla PD hasn't completed the firmware upgrades in all their subscriber units. The SMO will continue to periodically check the situation for final resolution.

  NOTE: There was no change in the status for this item in 2013.

- **North Pole** (carried forward from 2008)
  Previously, a System Design/System Analysis was completed at the request of Fairbanks North Star Borough and local public safety agencies regarding the potential for an additional site in the North Pole area. The report was published in March 2008.

  At the time of the original ALMR System design, it was determined that a site was not required in the North Pole area as the projected coverage met the

design requirements for mobile subscriber units. Funding options for a North Pole site continue to be explored.

Update 2012: Mr. Jim Kohler met with Chief Jeff Tucker, North Star Volunteer Fire Department, and they looked at possible places where the site could be co-located with existing infrastructure to save on costs of building a green site. At the end of 2012, the State was awaiting response from an organization regarding a co-location agreement and cost estimates.

Update 2013: At the May 1 User Council meeting, further exploration regarding a North Pole site was **tabled**.

- **Delta Junction** (carried forward from 2008)
  Delta area agencies advised the OMO in 2008 that ALMR coverage was no longer satisfactory and had degraded over the course of time. At that time, the OMO requested Motorola determine if the initial projected coverage in the area had been detrimentally affected by the relocation of the former Delta Junction site to Donnelly Dome, concurrent with the relocation of the former Donnelly Dome site to Ft Greely, and/or finally by the addition of a cellular antenna array to the Ft Greely tower.

  Motorola performed a thorough preventative maintenance inspection of the ALMR transmission/receiver equipment and a sweep of all lines/antennas and determined that all equipment was working within specifications. Additionally, Motorola determined there was a strong possibility that the Ft Greely tower cellular antennas, and additional lines, were causing an RF shading/obstruction condition to occur in the direction of Delta Junction.

  Motorola documented they believe an interference condition does exist in the area and is causing the observed radio behaviors and changes to the over-the-air signal levels. The source of this interference is a combination of tower obstruction/shading, land clutter (foliage), multi-path, and potentially outside RF interference.

  USARAK advised the UC at the Annual Training Conference in September 2009 that they would work with AT&T and the SMO to isolate the antenna on the tower in order to determine if the modifications by AT&T were causing degradation. Testing by the SMO indicated that there was no RF interference. USARAK is continuing to work the issue from their end.

Update 2012: Follow up testing, which involved a change of the ALMR transmit antenna at the site did not resolve the coverage issues that have been experienced. Additionally, no specific interference source was identified that could be mitigated.

At this time, no further action is planned as the site, which is operating within specifications, as confirmed with previous testing. This issue is determined closed.

Update 2013: The issue was **re-opened** at the May 1, 2013, User Council meeting when it was suggested coverage in the Delta area should be re-engaged as an existing coverage area that is underserved. Mr. Jordan Halden had met with a large group at Delta who stated although the mobile coverage was sufficient; the portable coverage was inadequate particularly over the ridge at Delta to Jack Warren Road. They felt they had much better coverage before the Delta Junction site was moved to Donnelly Dome.

Additionally, it was noted the Troopers could point out exactly on a map where they can't get coverage in the Delta area. The System Manager agreed there were areas where both mobiles and portables have issues. The User Council requested ETS look at the Delta area for enhancing coverage and were advised that Spring 2014 might be the soonest ETS could begin serious exploration.

- **Chena Dome/Chena Hot Springs Road**
  At the May 1 User Council meeting, the council was briefed Chief Jeff Tucker, North Star VFD, had mentioned Chena Hot Springs where there is no ALMR coverage, but only a conventional site where power is problematic.

  Major Leveque briefed there is a conventional site AST has access to, but he had talked to his troopers who stated there is virtually no coverage there even on the conventional side.

  DOT engineers were looking at how to bring down the cost to implement Chena Dome, but it would still be a significant cost regardless. ETS was requested to explore the Chena Hot Springs Road site and were advised that spring 2014 might be the soonest ETS could begin serious exploration.

  NOTE: The Stuart Creek 2 wildfire, in July, reached the Chena River and prompted an evacuation along Chena Hot Springs Road for residents between mileposts 18 and 34.

- **Kasilof Site**
  One additional channel was installed at the Kasilof site on March 14, 2013, per previous motion and vote of the User Council at the April 4, 2012, meeting in order to reduce/alleviate busies experienced by agencies on the Kenai Peninsula.

- **Kenai Site**
  Two additional channels were installed at the Kenai site on March 15, 2013, per previous motion and vote of the User Council at the April 4, 2012, meeting in order to reduce/alleviate busies experienced by agencies on the Kenai Peninsula.

- **Peger Road**
  One additional channel was approved for installation at the Peger Road site on March 21, 2013, per previous motion and vote of the User Council at the April 4, 2012, meeting in order to reduce alleviate busies experienced in the greater Fairbanks area. The System Management Office elected to not install the channel until after the 7.13 System software migration which occurred on August 6, 2013. At the time the channel was installed in November, it was discovered there were missing parts. The channel finally went operational on December 23.

7.0 On-going Projects

There are currently no on-going projects at this time.

8.0 Contractor Performance

8.1 The OMO is responsible for auditing and control of the policies and procedures, which provide for accountability, compliance, monitoring, and performance assessment of the ALMR System. Therefore, documents are reviewed annually and updated, as necessary, to reflect changes to System performance parameters or operational mandates. The status of ALMR documentation for 2013 is:

- 71 reviewed/updated
- 22 reviewed/approved by the UC
- 49 reviewed/approved by the OMO
- 0 retired by the UC
- 1 outstanding awaiting Executive Council approval
  - 2013 Business Case
- Newly developed

- Interoperability Procedure 300-3
- Emergency Button Activation Policy and Procedure 300-7
- System Key Management Policy and Procedure 400-16

8.2 The OMO performs third party Quality Assurance/Quality Control (QA/QC) of System Management Office (SMO) functions and general System oversight on behalf of the stakeholders/member agencies.

8.2.1 Key Variable Loaders

As part of the OMO QA/QC contractual requirement, a quarterly physical audit of Key Variable Loaders (KVLs), under the control of the SMO, is conducted and compared against those listed on the SMO equipment inventory. The results are as follows:

- **Date of Inspection:** February 22
  Findings: All KVLs were located and identifying numbers verified.

- **Date of Inspection:** May 29
  Findings: All KVLs were located and identifying numbers verified.

- **Date of Inspection:** August 30
  Findings: All KVLs were located and identifying asset tag numbers verified.

- **Date of Inspection:** October 30
  Findings: All KVLs were located and identifying asset tag numbers verified.

8.2.2 Infrastructure Equipment Spares

As part of the OMO QA/QC contractual requirement, a quarterly ALMR Random Infrastructure Equipment Spares Inventory inspection is performed on five randomly selected items from the SMO, Asset Manager's Infrastructure Spare Equipment Inventory list. The results are as follows:

- **Date of Inspection:** September 26
  Details: Physical inspection of the equipment took place at the Alaska Wireless facility located in Wasilla, Alaska.
  The five (5) items randomly selected for inspection were:
  - Quantar Oscillator – ALMR1001346 – Motorola – Model TLN3459A
  - Fire Extinguisher – ALMR3001364 – Amerex – 10 lb
  - 19 inch Flat Screen Monitor – ALMR2000264 – NEC – Model AS192-BK

- Consolette – ALMR1001552 – Motorola – Model L02KSSPW1AN
- Channel Bank – ALMR2000249 – Adtran – Model TSU600

Findings: All of the above items were located and asset tag numbers verified.

- **Date of Inspection:** December 10
  Details: Physical inspection of the equipment took place at the Alaska Wireless facility located in Wasilla, Alaska.
  The five (5) items randomly selected for inspection were:
  - Quantar Power Supply – SOA13-E17056 – Motorola – Model TLN3377A
  - Controller – SOA13-E7196 – Motorola – Model F4544A
  - Quantar Range 1 Receiver – SOA13-E18083 – Motorola – Model TLN3250A
  - Quantar Range 2 Exciter – SOA13-E17089 – Motorola – Model TLN3253A
  - Quantar Range 2 Exciter – SOA13-E17091 – Motorola – Model TLN3253A

  Findings: All of the above items were located and asset tag numbers verified.

NOTE: Effective July 1, 2013, the Operations Management Office began a new contract year and the Quality Assurance/Quality Control (QA/QC) oversight of Asset Management was re-added to the performance-based work statement. Therefore, there were only two quarterly audits performed for each area.

8.2.3 Catastrophic Natural Event Cleanup Kits

As part of the OMO QA/QC contractual requirement, a periodic inventory inspection is performed on a sampling of the Catastrophic Natural Event (CNE) cleanup kits maintained by the SMO.

The results are as follows:

- **Date of Inspection:** December 10
  Details: Inventory inspection was performed on three (3) of the kits; two at the Alaska Wireless facility, located in Wasilla, and one located in the Tudor Road SMO office.

Item	Serial Number or Asset Tag Number	Status
DeWalt 2 Gal Wet/Dry Vacuum		New
DeWalt Spare Vacuum filter	(DC5001)	New
DeWalt Battery		New
DeWalt Charger		New
Duct Tape	(1 Roll)	New
Plastic Sheeting	(1 Roll)	New
Broom	(1)	New

Shovel (Snow Blazer)	(1)	New
Husky LED Headlamp w/ 3 AAA batteries	(1)	New
Case of water (35 bottles)	(1 Case)	New
Trash Bags (Box of 60)	(1 Box)	New
AO Safety Goggle, face mask & ear plugs	(1)	New
Coveralls	(1 Disposable)	New
ECG Butane Micro Jet Torch	(1 Refillable)	New

Findings: All of the above items were located and inspected, with the exception of the case of water in each kit. Bottled water has a "Use by Date" and has to be rotated periodically. It is suggested that the SMO purchase the required bottled water and develop a schedule for swapping out the water as expiration dates near.

8.2.4 System Recovery Plan

In accordance with System Recovery Procedure 400-1, the System Recovery Plan shall be tested annually and all results of the test shall be recorded. The Security Manager shall be responsible for overseeing the testing and verifying that the results have been recorded. Results of the testing will be presented to the User Council.

NOTE: Real-world occurrences of, and response to, System failures shall meet the annual test requirement.

- **Date of Incident:** May 5, 2008
  Details: (as follows)
  Detection of the Disaster Condition: May 5, 2008/ ~11:30 a.m. - Low voltage alarm at Byers Creek Remote Radio Site
  SMO convenes a Disaster Recover Team: Mr. James Jones, Mr. Mark Jenks, Mr. Andrew Strait, and Mr. Jarek Grezda
  Security Manager Creates Plan: Mr. Chad Huls
  Disaster Recovery Plan Invoked: May 5, 2008
  IAO Release of Information: Not Required
  Return to Normal Operations: July 17, 2008
  Findings: On May 5, 2008 at approximately 11:34:03 a.m., a low-voltage alarm on the Byers Creek remote radio site was observed by Mr. James Jones, ALMR System Technologist. Initial disaster response efforts began immediately when Mr. Jones opened a case with the Motorola System Support Center.

After opening the case, the SMO contacted the on-call Motorola Technician in the area (Mr. Jarek Grezda). Additionally, another Motorola Technician (Mr. Mark Jenks) also took ownership of the case and dispatched Mr. Andrew Strait to the site. Mr. arrived at the Byers Creek site at approximately 1:27 p.m. on May 5, with Mr. Grezda arriving shortly thereafter.

The technicians did not immediately observe any sign of physical damage to the site or its equipment, and began to troubleshoot. On May 5, at approximately 12:30 p.m., the Motorola Case was updated with a note stating that the 48-VDC rectifier was in need of repair and was causing the low voltage alarm. The case was deferred until a repaired unit could be located.

On July 17, a fully functioning rectifier, which was previously located, was dispatched to the site. Down time due to this incident was minimal as the Byers Creek site, which was taken offline for less than ten minutes while the rectifier unit was removed and replaced.
Results: Disaster Recovery Plan Successful

- **Date of Incident:** July 19 and 22, 2013/09:15 a.m.
  Details: (as follows)
  Detection of the Disaster Condition: July 19 and 22, 2013/09:15 a.m. – Hard Drive failures at Zone 4 Gold Elite Server
  SMO convenes a System Recovery Team: Mr. Dave Forster, Mr. Jason Beach, and Ms. Susan Lamasko
  Security Manager Creates Plan: Taurean Corp
  Disaster Recovery Plan Invoked: July 19 and 22, 2013
  IAO Release of Information: Not Required
  Return to Normal Operations: July 20 and 24, 2013
  Findings: (as follows)
  Incident 1: On July 19, at approximately 09:15 a.m., the Zone 4 Gold Elite Server hard drive failure was observed by Mr. Jason Beach, Communications Foreman, Communications and Electronics. Initial disaster response efforts began immediately.

  After the hardware failure was discovered Mr. Beach proceeded with his recovery team in replacing the server hard drive and installed the Server Operating System, Antivirus, and CentraComm application. The data was restored from a backup image of the CentraComm directory.

On July 20, the team re-established a fully functioning Zone 4 Gold Elite Server. Total downtime was less than 24-hours.

Incident 2: On July 22, at approximately 15:30 p.m., the new Zone 4 Gold Elite Server hard drive installed two days prior, failed. This was observed by Mr. Jason Beach, Communications Foreman, Communications and Electronics, and initial disaster response efforts began immediately.

After the hardware failure was discovered Mr. Beach again proceeded with his recovery team in replacing the server hard drive and installed the Server Operating System, Antivirus, and CentraComm application. The data was restored from the backup image of the CentraComm directory.

On July 24, the team re-established a fully functioning Zone 4 Gold Elite Server. Total downtime was 40-hours.
Results: Disaster Recovery Plan Successful

NOTE: This oversight item was not previously included in the report, but is now included due to lack of consistent compliance. It will remain in the annual report.

9.0 Periodic Maintenance Inspections (PMIs)

Effective July 1, 2013, the OMO began a new contract year and the QA/QC oversight of SMO was re-added to the performance-based work statement. The OMO is responsible for providing QA/QC oversight of periodic maintenance inspections (PMIs) conducted by the SMO on ALMR sites on behalf of the UC. This process provides third party assurance that the sites are maintained to a standard in accordance with the Service Level Agreement (SLA) and identifies outstanding discrepancies that could potentially affect site operations.

During the second two quarters of 2013, there were a total of 20 PMIs QA/QC inspected by the Technical Advisor. They were performed at the following sites:

- Valdez
- Transportable Area South
- Divide
- Ernestine
- Tok
- Cathedral Rapids
- Beaver Creek

- Willow Mountain
- Hurricane
- Honolulu
- Reindeer Hills
- Byers Creek
- Blueberry Hill
- Ted Stevens Anchorage International Airport
- Hope
- Fire Station 12
- Chulitna
- Willow Creek
- Cottonwood
- Bailey Hill

10.0 System Enhancements

On August 6, 2013, the ALMR System operating software migrated from the Motorola™ 7.1.1 platform to 7.13. This migration entailed not only the software update but also replacing pieces of critical hardware prior to the actual date of the migration. All agencies currently operating on ALMR, including the Municipality of Anchorage, Federal agencies (both Department of Defense and Federal Non-DOD), Alaska State Troopers, Alaska Department of Transportation, as well as all the other State agencies and local law enforcement agency, fire department and emergency medical service were affected.

Together, with 20+ Motorola™ staff located on site at JBER, Zone 1 (Anchorage), Zone 2 (Fairbanks) and Zone 4 (Municipality of Anchorage), the combined ALMR/ETS team successfully upgraded the System's:

- 3 Master Sites
- 99 RF sites
- 70+ Consoles
- 28 Dispatch Centers

The process began in July 2012 and through weekly/monthly meetings, risks were identified and contingency plans were put into place. Agencies continued to operate through the migration as groups of sites were cutover to the new platform by utilizing their backup conventional systems, MotoBridge® or operating in site trunking/simplex mode. Throughout the migration process, the few glitches that were experienced were tracked and the corrective actions noted; some solutions were as simple as rebooting

the site router or reloading the software. The success of this undertaking can be attributed to the extensive pre-planning and the commitment of the vendor, the local ALMR/ETS staff personnel and the agencies who directly participated.

11.0 Supported Events

Many opportunities exist to allow the UC to further interoperability throughout the State, and remain up to date on current national standards. The Performance-Based Work Statement for the OMO allows the UC to utilize the OMO staff to contact member agencies, prospective member agencies, legislators, and other interested groups to disseminate information about ALMR.

In SOA FY2013, the State allotted a $200K contract for training. The administering office for the contract was the 5 Star Team. This contract focused on communications training tailored to the specific needs of ALMR agencies. Training was conducted from July 1, 2012, and continuing through June 30, 2013, corresponding with the State fiscal year. For purposes of this annual report we will not be utilizing any figures prior to January 1, 2013.

From January to June 2013, Radio and Emergency Communications Planning Training was provided to 355 individuals from Fairbanks Airport Fire and Police, Enterprise Technology Services in Anchorage and Juneau, Pioneer Homes, Valdez responders, Anchorage Probation and Electronic Monitoring, Kenai Peninsula College, State DOT Southeast Region Headquarters, University of Alaska Southeast – Sitka Campus, State DOT – Anchorage M&O, State DOT – Tok District, University of Alaska Anchorage and University of Alaska Fairbanks.

Beginning July 1, 2013, (SOA FY14) the State once again contracted with 5 Star Team, allotting $140K for continuation of training. From July through December, training was provided at the University of Alaska - Anchorage and the University of Alaska - Fairbanks in preparation for exercise Alaska Shield 2014. In addition, training was provided to Kenai/Soldotna/Nikiski/Anchor Point fire chiefs, over 60 principals and administrative staff at the Kenai Peninsula Borough School District, and also to the Kenai Peninsula Office of Emergency Communications. Areas of focus were Radio Operations and Interoperable Emergency Communications Training.

12.0 Finance/Budget

In accordance with the Cooperative Agreement, the UC will establish a budget process and each year develop a proposed budget for the next fiscal year to meet the operating,

maintenance and capital replacement needs of the System and shall submit the proposed next year's budget to the EC. All proposed expenditures and activities of the System, as well as funding sources, shall be reflected in the proposed budget. The proposed FY2015 Operating Budget was approved by the UC on July 3, 2013, for presentation to the EC. The EC approved the budget on August 15, 2013, and agreed it should be submitted into the SOA budget cycle for consideration of funding.

13.0 Other Focus Areas

Additional areas currently being tracked:

- SATS
  SOA continues focusing on improving the existing infrastructure of the State of Alaska Telecommunications System (SATS), continued development of staff and improving internal processes. Funding for these improvements came from the SATS Capital Deferred Maintenance plan (year 3 or 5). The results are in, and 2013 was a marked success. The following are some of the highlights:
  - SATS Organizational Restructure – On the Operations side of SATS, the maintenance technicians were moved in to 3 teams, each with their specific areas of responsibility based largely on geography. Supervisors were put in place for each of the teams to lead and manage the work done by internal staff and contractors. Additionally, a central monitoring role was created to handle incident resolution from end to end, freeing up the other teams to continue on with their projects and maintenance. Since the reorganization, the morale of the Operations group has improved, the quality of work has improved and there has been a reduction in the number of outages/incidents within the system.
  - Parks Highway Microwave Upgrade – Implement Diverse Routing between Anchorage & Fairbanks using MPLS. Bandwidth has increased twofold and service was improved by providing alternate paths for the network and ALMR, the mission critical voice service which depends on the SATS network. Customers such as AKRRC, DNR, and DOT also benefit from the improved service.
  - Donnelly Dome Installation – The addition of the SATS site at Donnelly Dome allows for a full ring topology between Anchorage and Fairbanks, creating a robust second path for data to flow. This also improves traffic down the Richardson Highway.
  - SATS Dashboard Phase 1 implemented – The Dashboard provides a consolidated view of the most critical monitoring information about our infrastructure. This view allows SATS staff access to critical information from

which key decisions can be made regarding severity, and what appropriate action should be taken.

- Preventive Maintenance and Inspections (PMI) of over 50 helicopter access only sites. Conducted PMIs at 70 drive-to sites; towers, antennas, shelters, generators, battery plants are all subject to the harsh conditions of Alaska. It is important that SATS visit our sites at least once per year to performance maintenance to ensure the sites are able to have stable power and communications. The communications equipment within the shelters also needs to be checked for components which require replacement.
- Customer Sponsored Projects:
  - Susitna-Watana Dam 2 Way Radio Project – SATS was able to respond very quickly to build and implement 2 way radio communications for an important project to the Governor and the State of Alaska.
  - Department of Natural Resources (DNR) – Forestry ALMR Dispatch/Console Consolidation. This work completed allows DNR-Forestry to greatly improve their mission critical communications and coordination particularly during fire season.

NOTE: SOA maintenance and milestones are briefed at the monthly UC meeting.

- Outstanding Maintenance
  Delays in addressing R56 grounding at sites continue to be a major concern, some being over nine years old.

14.0 Conclusion

This report addresses the status of various issues regarding the operation and management of ALMR and outstanding items noted during this calendar year, or carried forward from previous years.

The efficiency and effectiveness of the OMO and SMO in performance of their contract functions meet the expectations of the UC. Concerns, that continue to be monitored by the OMO, are: 1) long-term funding for System upgrades; 2) capacity enhancement at remaining three-channel sites; and 3) ensuring continuity of ALMR training.