

REVL Inc.  
REVL Communications & Systems  
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Federal Business:

Over the past 20 years REVL has been successfully fulfilled thousands of contracts and purchase orders with almost every federal agency in Alaska and a few in lower 49 states. From 1988 – 1999 REVL Inc. has supplied over 50 million dollars of telecommunications equipment, engineering, installation and support services to DoD and federal agencies in Alaska.

Major Projects:

- REVL engineered, designed, supplied and installed a Bi-Directional Amplifier system to provide in-building communication for 400MHz trunk and paging systems after construction of the a new DoD Hospital at Elmendorf AFB, Alaska.
- REVL engineered, supplied, installed and programmed first General Electric 406MHz digital trunk radio system for the U.S. Army in Alaska. System included 3 five channel sites with over 800 Army users at Ft. Richardson, Ft. Wainwright and Ft. Greely and over 1800 Air Force users at Elmendorf AFB. REVL supplied support services from 1988 - end of life (2002) including site expansion equipment, consoles, software upgrades, installation and maintenance support.
- REVL custom designed, built and supplied a 3 channel portable low current drain 406MHz trunk radio site for use by U.S. Army during field exercises in Alaska.
- REVL custom designed, built and supplied a low current drain 400MHz linked VHF-AM system for a demo feasibility project for the FAA.
- REVL engineered, supplied and installed a 5 site remote mountain top communication system for U.S. Fish and Wildlife Service in Alaska. Contract required REVL to engineer battery systems to operate at -40 degrees for 3 years with no maintenance. I also required the design of Mt. Top shelters that would survive Alaska's mountain environment. Because no manufacturer could be found REVL start its own fiberglass manufacturing division to build these specialized shelters. REVL's fiberglass division, Alaska Enviorshell secured a GSA contract and supplied Mt. Top shelters to U.S. Forest Service, Park Service, FAA, BIA, BLM and Fish and Wildlife Service.
- REVL engineered and supplied the first interoperability GE and Motorola digital DES conventional communication system for the U.S. Army in Alaska.

In 2000 REVL chose to change its business plan of direct marketing to federal agencies because of the federal government's preference for using Alaska Native and Tribal 8(a) contract vehicles. The company established teaming agreements with two Alaska Native 8(a) companies and has continued to supply telecommunications equipment and services to DOD and federal agencies through these companies.

- REVL has supplied \$6 million dollars of P25 conventional and trunk radio equipment to these ANC 8(a) for use on DOD P25 systems in Alaska. REVL has also provided support services for the P25 radio equipment supplied under this sale.
- REVL has supplied \$750 thousand dollars of P25 trunk radio equipment to an ANC 8(a) for use on DOD P25 systems in Hawaii.

- REVL has supplied miscellaneous equipment for a number of 8(a) contracts to include Air Conditioners, 50KW generators, non-static flooring, grounding systems, wireless equipment, fiber optic cable, shelters etc...

REVL has been a subcontract to 8(a) companies for the following projects:

- Communication Site Upgrades to IEEE, National Building Code, National Fire Code and National Electrical Code Standards. REVL performed all the engineering and construction on this project. The 8(a) project client was the U. S. Army at Ft. Richardson, Alaska.
- Satellite TV/CATV and Fiber Optic Project – REVL performed the engineering and construction for all phases of this project. The 8(a) project client was the U.S. Army Cold Weather Regional Test Center at Ft. Greely, Alaska.
- CRTC Wireless Data System – REVL performed the engineering and construction of all phases of the proving ground wireless data system for this project. This project included a custom designed and built portable wireless system for field deployment to operate -40 degrees. The 8(a) project client was the U.S. Army Cold Weather Regional Test Center at Ft. Greely, Alaska.
- SIPRNET/NIPRNET Project – The 8(a) project client was the U.S. Army at Ft. Shasta, Hawaii.
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#### State of Alaska and Local Government Business:

REVL has been a supplier of conventional radio and P25 telecommunication equipment to the State of Alaska, boroughs and cities for 20 years in Alaska.

#### Major Projects:

- Prison Bi-directional Amplifier systems
- Rural Emergency Communications Pilot Projects - Provide an interoperable solution that will allow the various agencies to communicate with their existing wireless infrastructure at the local level, e.g., on-site at disaster areas  
Provide this solution as seamless to the field user, still retaining normal radio communications within the agency  
Integrate existing and new wireless technologies into the interoperability solution including the ALMR systems and secure, encrypted communications  
Provide a wide area seamless solution to allow for large statewide rural emergency interoperability network project has been identified by the DMVA to provide this implementation at Craig/Klawock and Bethel as a pilot project to determine the feasibility of integrating these wireless systems in rural Alaska.
- Department of Military and Veterans Affairs, Division of Homeland Security and Emergency management, Anchorage Alaska.
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- 20+ local government Public Safety communications systems including the state capital police and fire department system

#### Private Industry Large Projects:

In 1992 REVL engineered, supplied, programmed and installed a two site 20 channel trunk radio system and 2000+ radios to Arco and British Petroleum for operation on the North Slope Oil Fields. The company has continued to provide technical support, software and hardware upgrade support and additional site expansion and equipment purchases.

In 2005 REVL was awarded a 1.3 million dollar contract from Alyeska Pipeline Service Company to supply communication base and repeater stations and interconnecting interface equipment to support radio communications service on 30 sites along the 800 mile Alyeska pipeline.

❖ Homer Electric Project – 2003 - Present

- Installation of 220MHz radio and data communication system - Homer, Alaska

Projects included:

- Project management – Equipment Procurement, Installation, Field Engineering and Test and Acceptance

Hardware Installation

- Two new tower installations
- Transmission line and antenna installations on nine towers
- Installation of six sites with three channels each of 220MHz RF site equipment
- Installation of four sites with 5.8 GHz Microwave links, transmission lines and Microwave dishes
- Installation of two simulcast controllers
- Installations of 47 mobile radios
- Installation of (2) Zetron Series 4010 consoles

On Site Field Engineering

- Engineer solutions and equipment modifications to enhance system operation and to solve hardware and software problems encountered during installation of systems

❖ Point-to-Point & Wide Area Wireless Data Solutions Consulting 2002 to Present

- Throughout Alaska

Projects included:

- Project Budget Preparation, Field Engineering, System Design

Engineering

- Path loss and interference analysis reports developed using spectrum analyzing and signal strength test equipment of proposed Point-to-Point Wireless networks
- Interference analysis reports developed using spectrum analyzing and signal strength test equipment of proposed omni-directional Wireless networks

- RF coverage maps of proposed omni-directional Wireless networks
- RF coverage analysis reports signal strength test equipment of proposed WLAN radio coverage in the facility
- Engineering design of RF subsystem and Antenna systems for Point-to-Point Wireless networks
- Engineering design of RF equipment and Antenna systems for omni-directional Wireless networks
- Engineering design of in-building WLAN system to support Wireless networks

❖ Providence Hospital, Radio Systems Expansion 2004 to Present

- Anchorage, Alaska

Projects included:

- Project management – Client Need Analysis, Project Budget Preparation, System Design, Equipment Procurement, Installation, Field Engineering and Test and Acceptance

Engineering

- Engineering Design for to expand distributed RF in-building antenna system to support VHF, UHF and 800MHz radio spectrum
- Engineering design for turnkey 800 MHz BDA system to support Anchorage Fire Department
- Engineering design for Zetron Console system to support IOC ED center
- Engineering design to provide an interoperability solution for Facilities and Security personnel.

Hardware Installation

- Extend Internal Antenna System
- Expansion of the distributed RF coax system to include all riser rated cable, hangers, connectors
- Replacing all existing splitters with multiband splitters and adding new multiband splitters as required, as-built drawings and labor.
- Install all required equipment at the RF head end to support VHF/UHF/800MHz RF inputs to the distributed RF coax system
- Install 800 MHz BDA to support Anchorage Fire Department 800 MHz radio system.
- Install PAMC Emergency Operation Center Communications: Relocate and/or install new communications system capabilities into new ICS EOC in the ED Conference Room

- Install systems to include Security and Facilities 2-way radio remotes, AHEAR net radio, MOA emergency radio system, HAM radio antenna feed.
- Install Zetron series 4010 console with 12 Conventional Radio interfaces and 2 analog telephone lines. New radios procured and
- Install new AK DOT VHF Low band, Amateur "2-meter", and Amateur "2-meter" packet data.
- Consolidate Radio Communications Room, Relocate various antenna, radio and transceiver equipment located within Providence to one designated room.
- Security/Facilities Radio Intercommunication, Provide an engineered turn-key solution and necessary hardware/software to allow security and facilities radios to be able to interoperate when required.
- ❖ Providence Hospital, Paging System Expansion 2003 to Present
- Anchorage, Alaska

Alaska project management - Client Needs Analysis, Budgetary Preparation, Equipment Procurement, Installation, Field Engineering and Test and Acceptance

Engineering

- Paging System Expansion Engineering Design for Simulcast Operation
- Paging System RF Site Coverage Analysis
- Paging System RF Site Acquisition
- Procurement and turn-key integration into existing Paging System

Engineering Design and Installation Services

- Design and Analysis services of existing system and sites to expand coverage and improve system performance metrics
- Engineering design to convert system from zone to simulcast operation
- Installation services to relocate existing equipment to new site locations seamlessly
- Installation services to add additional sites to system
- Integration into building distributed RF subsystem
- ❖ Oil Industry Digital Trunked Communication Systems Expansion - 2003
- Expanded existing system for West Field coverage
- Engineered and installed SCAT site

Projects included:

- Alaska project management - Client Needs Analysis, Detailed RF Coverage Study, Budgetary Preparation, Installation, Field Engineering and Test and Acceptance

#### Hardware Installation

- Alaska staging and testing of digital trunk radio systems
- Complete system software upgrade for SCAT system compatibility
- Complete site installation of 800MHz digitally trunk backbone SCAT systems
- Installation of Multi-site controller interfacing the new SCAT site
- Antenna installation of SCAT trunk system

#### Client Operational Requirement Analysis and Software Programming

- Analysis Arco/BP/Northstar programming requirements for backbone systems and Multi-site operation to intergrate SCAT system into network
- Program and testing backbone systems and System Management computers
- Program and testing of Multi-site controller, consoles with new SCAT expansion
- Programming and testing user equipment

#### On Site Field Engineering

- Engineer solutions and equipment modifications to enhance system operation and to solve hardware and software problems encountered during installation of trunk systems

#### Long-term support and contracts:

- Warranty maintenance contractor for all digital trunk radio equipment
- Contractor for backbone maintenance for Arco/BP/Northstar/SCAT digital trunk backbone systems
- Contractor for trunk radio user equipment maintenance
- Contractor for systems coverage studies
- Contractor for systems engineering for antenna re-configurations and bi-directional amplifier operation
- Contractor for backbone system and user radio equipment software re-configuration
- Contractor for digital trunk systems backbone hardware expansion
- Contractor for digital trunk systems backbone software upgrades
- Contractor for Y2K hardware and software upgrade backbone and user radio equipment