

Leading Provider of Gig-E Broadband, Satellite Ground Station, and Cloud Service Connectivity



Q QUINTILLION

Corporate Capabilities Statement

Quintillion is the first and only telecommunications operator to build a submarine and terrestrial fiber optic network in the Northwest and North Slope Arctic regions. Spanning over 1,600 miles, Quintillion's US-owned, carrier-grade system currently provides Gig-E data transmission capacity at incomparable levels of security in a remote, yet geopolitically significant region. In January of 2021, Quintillion and ATLAS Space Operations brought online the highest latitude satellite ground station on U.S. soil. Paired with a connection to Equinix's SE2 International Business Exchange in Seattle, Quintillion is bringing never before seen space communications infrastructure to the American marketplace.

Current Service Area

Quintillion's existing network, operational since 2017, currently serves the Alaska markets of Nome, Kotzebue, Point Hope, Wainwright, Barrow/Utqiagvik, Oliktok Point, and Prudhoe Bay/Deadhorse, as

well as the oil and gas infield. As of January 2021, Quintillion operates, in conjunction with ATLAS Space Operations, the highest latitude satellite ground station on U.S. soil. Its 3.7-meter S & X band antenna is also directly connected via fiber to the Equinix SE2 International Business Exchange in Seattle. Quintillion has plans to expand its ground station operations in the coming years.

Business Model

Quintillion sells broadband network services to federal and commercial telecom providers and maintains strategic relationships with Alaska Native corporations serving federal government agencies. This distribution model allows for multiple broadband access providers in markets where there was previously no competition, thereby incentivizing improved products, price, and services for end users.

Investors

A registered federal contractor (in SAM), Quintillion is privately funded by US-owned companies. Its investors include a combination of Alaska Native corporations, Alaska telephone cooperatives, and private equity companies.

Current Contract Vehicles for Service Procurement

Quintillion is a member of the Consortium Management Group (CMG) C5, which is a "consortium composed of leading companies and institutions in the C4ISR and cyber technology sectors." The Other Transaction Authority (OTA) is the relevant acquisition mechanism, which offers a simple, transparent acquisition mechanism for the development and deployment of new warfighter capabilities.

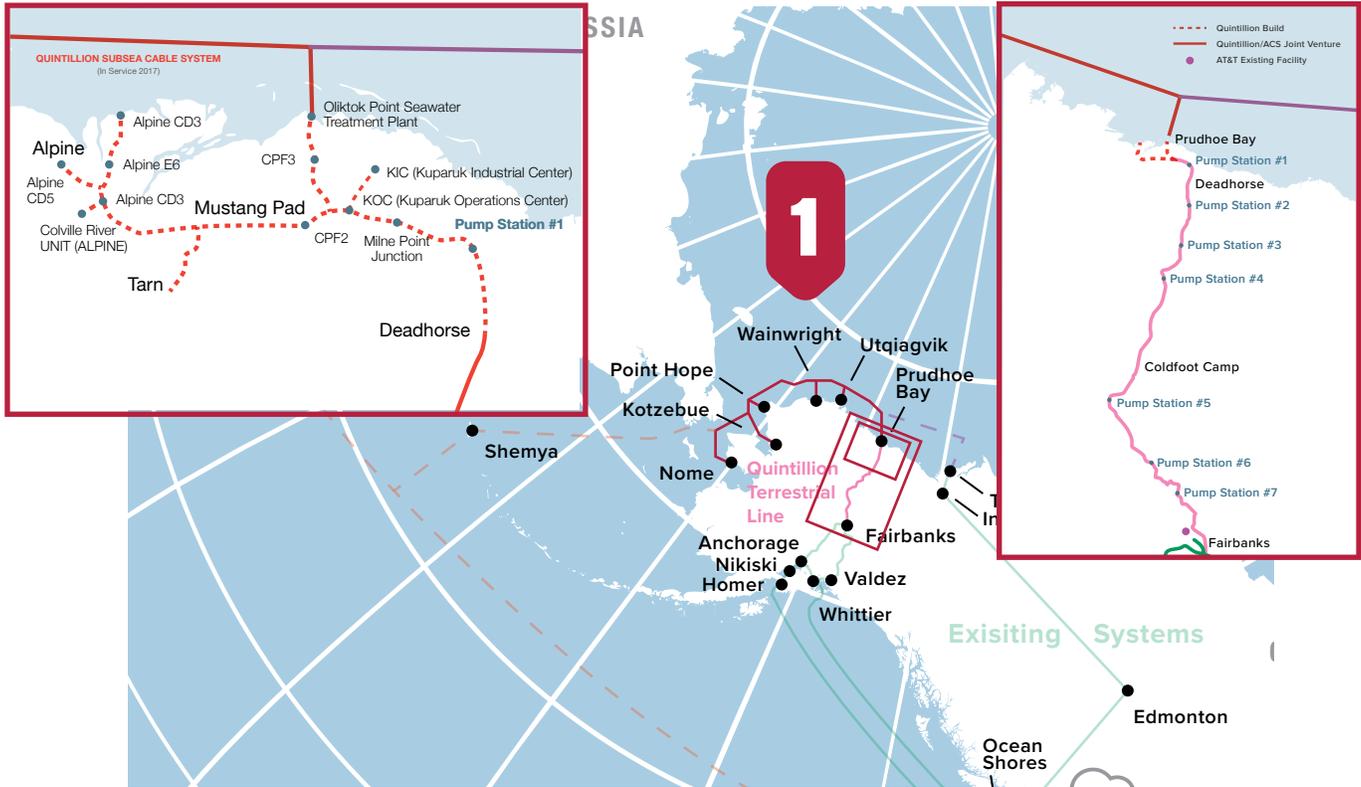
In April 2019, Quintillion executed a Basic Agreement (BA) with the Defense Information Technology Contracting Organization (DITCO). The BA expedites the issuance of awards to Quintillion for orders of telecommunications services utilizing the Inquiry/Quote/Order (IQO) process. This allows Quintillion to contract with the Defense Information Systems Agency (DISA) in support of the agency's telecommunications needs. This agreement was created by DITCO to serve registered federal contractors with NAICS codes of 517311 and/or 517911.

System Highlights

- The only subsea fiber optic system in Alaska connecting Nome and Fairbanks
- 3 Pair System – initial design capacity 100 Gbps x 100 per fiber pair = 30 terabit per second capacity
- Resilient network design protects against identified threats
 - Strategically routed where there is a lack of fishing, seasonal ice cover, and limited ship transportation to avoid the most common causes of damage
 - Designed to withstand ice with armoring of the cable, avoiding historical locations of ice scour, and burial of cables below known depths of ice scour
 - All six cable landings are installed below the land-fast shore ice using horizontal directional drilling techniques, 60-80' deep, and in steel conduit up to a mile off shore
- Trunk and branch configuration provides redundancy and reduces latency
- Robust cable power feed and redundant equipment at each terminal power station with 24/7 monitoring and response
- Phase 1 Subsea in-service since December 2017

Critical Infrastructure

- Network has been designated “critical infrastructure” by Team Telecom and does not contain any non-compliant foreign components
- Geographically remote, yet in proximity to strategic foreign interests
- Buried and hardened against potential surveillance and interception, unlike 5G or satellite systems, which are susceptible to RF interception and disruption
- Ongoing network security agreement with TeamTelecom



System Overview

Phase 1 - Alaska

Quintillion’s Subsea Network: A 1,182-mile submarine fiber optic cable main trunk line between Nome and Prudhoe Bay, Alaska. Additional branches are installed in the Alaska communities of Kotzebue, Point Hope, Wainwright and Utqiagvik (Barrow).

The Quintillion Terrestrial System: 505 miles of fiber optic cable between Fairbanks and Prudhoe Bay, Alaska, along the Dalton Highway. At Fairbanks, the new fiber connects to existing networks reaching Anchorage, Alaska, Portland, Oregon and Seattle, Washington, providing fiber links between the Continental United States and the North American Arctic.

The system has been operational since December 2017. Quintillion’s continuing expansion will add resiliency and diversity to the network.



Phase 2 - Japan & Asia-Pacific / Arctic Ring

The planned Japan–Washington State Trans–Pacific Cable System (JAWS TPCS) will provide a diverse and low-latency connection between the United States and Japan, as well as onward connectivity to Asia-Pacific destinations. It will also enable interconnection with the Phase 1 network via a new submarine cable system extending from a new branching unit to be placed along the JAWS-TPCS to the Phase I Nome branching unit.

Once complete, this cable will connect Alaska to the Pacific Northwest at a new Cable Landing Station (CLS), creating a geographically diverse fiber ring around Alaska which, in turn, creates redundancy and resiliency to North American telecommunications routes.

Additionally, the System will have the potential to provide fiber optic capacity to US government clients located at Shemya Island. This connection will be a unique low latency path for Alaska and the US North Pacific cable traffic to Asia.

Phase 2 is in planning / development.



Phase 3A - Alaska/Canada

Phase 3 extends the network east from the Prudhoe Bay branching unit 350 miles, with a landing in Northwestern Canada at Tuktoyaktuk. The system then proceeds 95 miles overland to Inuvik. From Inuvik, Quintillion will interconnect with existing fiber optic capacity to access continental US locations. We anticipate the ability to terminate Alaska traffic to major internet and telecom gateways in all US time-zones, including Seattle, Denver, Chicago, New York and Ashburn, VA. Phase 3 creates multiple diverse routes for Alaska traffic on Quintillion’s fiber optic infrastructure.

Phase 3A is in development with a target RFS date of Q4 2022. Quintillion possesses a Canadian Landing License that is valid through 2024.

Phase 3B - Canada/Europe

Phase 3B is designed to extend east from Northern Canada through the Northwest Passage with potential landings in the Canadian Arctic, Greenland, and Iceland en-route to London, England. Other than London, additional potential landings in Europe are flexible and will be topics of discussion with one or more strategic partners contemplated on the Phase 4 project. Phase 3B further diversifies Quintillion’s fiber optic infrastructure and connects Europe, North America, and Asia via a unique and low latency route (~153 ms London to Tokyo) on the only submarine cable system that does not transit one or more continents. Our low latency design will eliminate a major source of delay and potential service disruption.

Phase 3B is in early development and targeted for 2023 or later.

Management Overview

Management Expertise

- Collectively has more than 100 years of telecommunications installation and deployment experience for fiber, microwave, and satellite systems, including deployment in the Arctic
- Extensive federal contracting experience, with decades of successful performance in a variety of sectors meeting mission-critical requirements
- Excellent track record of community outreach to garner support with Alaska Native and rural markets, permitting agencies, and other stakeholders essential to the success of deploying telecommunications systems in the Arctic
- Top Secret Clearance

Management Team



George M Tronsrue, Chief Executive Officer, has 35 years of prior experience in wireless, fiber optic and telecom infrastructure in more than 70 major US markets, including executive leadership roles at Monet Mobile Networks, XO/Nextlink Communications, espire/American Communications Services, Inc, Teleport Communications Group and MFS Communications. Since 2010, George serves as President at MFSI Government Group, a Service-Disabled Veteran Owned Small Business he founded. MFSI specializes in providing classified mission critical national security and warfighter support solutions and services. A graduate of the US Military Academy at West Point, NY, he served in the US Army as an airborne, ranger infantry officer from 1978-1983, until a line of duty accident resulted in his medical/disability retirement.

Management Team



Timothy Leybold, Chief Financial Officer, began his career as a CPA with an international accounting firm. Leybold was previously CFO for Till Capital Ltd., ICO Global Communications, Port Blakely Companies, and RLC Industries. Leybold has significant experience serving private equity firms in a variety of corporate finance projects. Leybold is responsible for Quintillion's financial reporting to investors and lenders, and oversees the accounting, budgeting and treasury functions.



Michael "Mac" McHale, Chief Revenue Officer, with 30 years' experience in broadband telecommunications infrastructure development and management, Mac is a proven, results oriented leader with a track record of performance in start-up, turnaround and fast-paced organizations. His experience encompasses the complete spectrum of Wireless and Wireline broadband/network technologies, vast experience in all facets of delivering service to both the Business and Consumer markets and the full gamut of financial responsibilities. It is Mac's industry knowledge, personal credibility, nimble strategic mind that have been instrumental in negotiating and securing multimillion-dollar strategic investments from both the US Government and private equity markets.



Matt Peterson, Chief Technology Officer, is a 20+ year veteran in telecommunications and Alaska operations. Matt's career includes a leadership role with one of Alaska's largest telecommunications companies, and critical network planning and systems engineering in the defense and space industry. Under Peterson's management, Quintillion operates and maintains the most resilient and extensive fiber optic network in Alaska.



Lance Dubsky, Chief Security Officer, has over 30 years of networking, communications, and information security experience working in the public and private sector. After retiring from the Air Force, where he supported global communications and intelligence missions, Dubsky was the Deputy CISO for the National Reconnaissance Office (NRO). In this role he managed the Information Security Portfolio and was responsible for security oversight of a \$1B+ IT infrastructure. Dubsky has also served as VP of IT Security at Iron Mountain Inc., Chief Security Strategist for FireEye Inc., and Head of IT Security for Meggitt PLC. He is certified as both an Information Systems Security Professional (CISSP) and Information Security Manager (CISM).

Advisors



General (Ret.) Charles H. Jacoby, Jr. Senior Strategic Advisor, has over 36 years of experience leading military, government, and international organizations. Prior to retiring from the military, he served as the first Army officer to command North American Aerospace Defense Command (NORAD) and the United States Northern Command, where he led the 1,800-person bi-national and joint headquarters, integrating 35 federal, state, and non-governmental organizations for the defense and security of North America. Far from his only experience in the high north, General Jacoby also commanded U.S. Army Alaska and was the Deputy Commander of Alaska Command. General Jacoby has commanded at all levels in Joint and Army assignments, from company to geographic combatant command, including: combat operations in Grenada with the 82nd Airborne Division; Operation Enduring Freedom, Afghanistan; and Operation Iraqi Freedom, Iraq. General Jacoby holds a B.S. from the United States Military Academy at West Point, NY; an M.A. in History from the University of Michigan; an M.S. in Military Arts and Science from the School of Advanced Military Studies at Fort Leavenworth, Kansas; and an M.A. in Strategic Studies from the National War College at Fort McNair, Washington, DC.



General (Ret.) John F. Campbell, Special Counselor to the Board, retired from the US Army in May 2016 after 37 years of active duty service. He most recently served as the Commander of US and NATO Forces in Afghanistan from August 2014 to March of 2016. He also served as the 34th Vice Chief of Staff of the US Army. He holds a Bachelor of Science degree from the US Military Academy and Master's degrees in Public Administration from Golden Gate University, as well as an honorary MS in National Security Strategy from the Army War College. He currently serves on several corporate boards of directors, advisory boards, and veteran non-profit boards. He is the Chairman for Army Emergency Relief (AER), Chairman for NS2 Serves, and the Chairman for the MITRE Army board of advisors.