Broadband USA Applications Database

Applicant Name: SKYPORT INTERNATIONAL, INC

Project Title: SEON (Satellite Emergency Operations Network)

Project Type: Comprehensive Community Infrastructure

Executive Summary

SEON (Satellite Emergency Operations Network) is a comprehensive interoperable network to provide broadband emergency satellite communications support to Emergency Management Teams. SEON sets the new standard for emergency satellite communications by incorporating equipment standards, dedicated capacity, and ongoing support and services to Public Safety Entities. The emergency satellite network is Always On and is available when each Public Safety agency needs it, enabling rapid deployment. Public Safety has been deeply impacted by previous natural disasters. Within the past five years, the Gulf Coast region has endured 150 declared natural disasters, impacting over 88 million American citizens. The lessons learned have caused Emergency Management agencies to assess the requirements needed to provide for the continuity of operations when much of the infrastructure is in a state of failure or is completely destroyed. Thus, forcing agencies to purchase their own emergency solution without any uniform or standard access to a ubiquitous broadband satellite solution designed specifically for this very important community of public safety organizations. SEON was designed and is necessary for Public Safety Entities to continue to efficiently protect citizen lives. The SEON network provides; uniform reach-back to Incident Command Systems, full voice capability, broadband data and internet capabilities, ongoing training and support, interoperable video teleconferencing capabilities and ongoing equipment maintenance. SEON proposes a phased roll-out of the emergency broadband network. Phase 1 will identify service areas in the Gulf Coast region, most impacted or susceptible to natural disasters: Texas, Louisiana, Alabama, Florida, Kentucky, South Carolina, North Carolina, Georgia, Tennessee and Mississippi. In the future, the network has the capability to expand and be replicated throughout all 50 states. SEON is designed to extend capacity, capabilities and services privately dedicated to Public Safety Entities; enabling ongoing significance for the future. SEON Phase 1 is projected to serve over 700,000 square miles, reaching 88 million citizens, 699 Public Safety Entities (including 60 large Public Safety Entities indicated as Community Anchors) and 30 Community Colleges throughout the high risk Gulf Coast states - all in need of an affordable, interoperable emergency satellite communications network. The 60 Large Public Safety Entities representing Community Anchors average approximately 7 satellite terminals each, totaling 418 network subscribers. The 639 Small Public Safety Entities representing Business Customers average 2 satellite terminals each, totaling 1,278 network subscribers. When Public Safety Entities are not deployed or testing, SEON's stand by capacity will become available to 30 non-subscribing, non-paying Community Colleges. Since the 30 Community Colleges are not paying subscribers, they are not counted in the subscriber total. Total subscriber count comes to 1,696 including 418 Community Anchor subscriptions comprised with large Public Safety Entities and 1,278 small Public Safety Entity subscriptions representing Business Customers. The SEON
Network will allow third parties to act as sales agents provided that they sell to qualified and approved Public Safety Entities. However, SkyPort will service their customers. The technical design of the SEON Network is based on iDirect and Cisco technology and will integrate seamlessly into each local agency on the private network. The broadband SEON Network will be built using the iDirect Evolution DVB-S2 incorporating its new modulation (QPSK, 8PSK and 16APSK) and FEC schemes enabling Adaptive Code Modulation with each remote able to achieve maximum throughput. SkyPort currently supports several Public Safety Entities including the Florida and Texas National Guards. But the current network has limitations and is not suitable to support National or regional Public Safety Network. The expansion of the current network will allow the SEON Network to service the entire Gulf Coast region and dramatically improve the existing infrastructure, while significantly reducing federal, state and local agency cost and risk. The primary SEON Network Operating Center (NOC) is located at Ellington Joint Reserve Base in Houston, Texas, earned the World Teleport Association’s ('WTA') Teleport of the Year Award in 2004. The tradition for excellence continues as SkyPort was named one of the Fastest Growing Teleports in the 2006 WTA Teleport Report and again in 2008. SkyPort's NOC is staffed with FEMA ICS and NIMS trained professional engineers who manage customer communications 24 hours a day. The SkyPort Teleport and NOC facility is designed to deliver maximum security and reliability and implements several powerful fail-safe systems, not just for data transmissions, but for electrical power and other vital facility-specific operations. The facility is secured with perimeter barriers, video surveillance and 24 x 7 military police patrols. All core systems are redundant with automated fail-over and load balancing that engineers can manually override. Multiple, redundant, diversely routed high-speed fiber connections and back-ups have been installed in the facility from several vendors and varied directions. SkyPort leverages a back up teleport with Datacom, L.L.C. located in Lafayette, Louisiana. To incorporate a higher level of redundancy, SEON Network proposes a backup teleport, dedicated to Public Safety Entities to be located on the Texas National Guard Military Base on Camp Mabry in Austin, TX. SkyPort's experience and past performance demonstrate the ability to operate a broadband infrastructure and serve as a highly sustainable broadband service provider under the BTOP Grant for the SEON Network. SkyPort has been honored to serve the US National Guard for many years and is the only satellite provider to be awarded the prestigious 'Minuteman Award' in 2006 from the US National Guard Bureau for providing continuous service during Hurricanes Katrina and Rita. SkyPort was again tested in 2008 when Hurricane Ike made a direct assault on the Houston-Galveston area. The teleport remained 100% operational throughout the event and sustained no damage. After the storm passed, many critical entities including the Texas and Florida National Guard units relied on SkyPort voice and data services in the most devastated areas of the storm. SkyPort is the first commercial satellite provider to work with Cisco to effectively engineer a satellite network that provides end-to-end services for Cisco's TelePresence solution. The SkyPort network solution extended the reach of Cisco TelePresence far beyond terrestrial and wireless networks to remote, tactical locations where terrestrial bandwidth is not available. In a project for UnitedHealth Group, SkyPort was the first satellite provider to implement Cisco's HealthPresence solution via satellite. Cisco's HealthPresence combines state-of-the-art high definition video, audio and sensor data including feeds from medical diagnostic equipment to create an environment similar to what most people experience when they visit their doctor or health specialist. SkyPort has a viable history of building trusted networks with consistent customers and will leverage past performance skills and experience to sustain the broadband SEON Network. SEON is projected to
cost $26,498,482 to deploy Middle Mile broadband infrastructure to 1,696 subscribers including 418 Community Anchor subscribers comprised of large Public Safety Entities and 1,278 small Public Safety Entity subscribers representing Business Customers. When SEON Members are not deployed or testing, 30 non subscribing Community Colleges will access SEON capacity. In order to support the SEON Network Phase 1, a total of 34 new direct jobs will be created as a result of SEON. The new staff requirements will approximately break out as follows; 1 Web Based course developer, 2 Certification Trainer, 12 Field Staff: Trainers, Repair, engineering, 5 account managers, 2 Accounting Staff, 4 System and Network Engineers, 5 Level I, II and III help desk and support, 1 Facilities Manager and 2 Product Managers. The majority of which will be located at SkyPort's corporate headquarters on Ellington Joint Reserve Base in Houston, TX. Additional staff will be needed by the following organizations, iDirect which builds all network modems for our end users, EchoStar who is our key partners but also provides satellite capacity to our network, Cisco Systems who supplies our network routers, call manager equipment plus hand held devices, and AVL who manufactures our satellite antenna’s specified in all field equipment.