

Customer Applications

Air-to-Ground Communications

Problem:

The city of Los Angeles must quickly and accurately predict the path of dangerous wildfires in order to protect its residents. In the past, city helicopters took aerial photographs and saved the images onto floppy disks before landing the aircraft to transfer the images to analysts - a lengthy and time consuming process.

Solution:

Taking advantage of an impressive communication range and fast data transfer speeds, the city of L.A. chose NovaRoam for wireless communications between the helicopter and the operation center on the ground. Now, mission-critical images are immediately transmitted from miles away in a matter of seconds. This provides the decision makers with instant access to invaluable images, thus helping expedite community-wide evacuations and saving lives in the process.

Tactical Networking

Problem:

A European government's counter-terrorism police force needed a high-performance wireless data backbone for tactical field operations.

Solution:

Each vehicle in the fleet was outfitted with a NovaRoam Mobile Router to relay mission-critical information to a nearby mobile command center. In turn, this data would be shared with operational headquarters, located miles away. In addition, special portable "suitcases" containing NovaRoams could be rapidly deployed throughout the area to extend the range of the wireless network. All of this results in a dynamic mesh network that facilitates real-time information sharing.

Oil & Gas Exploration

Problem:

A seismic data acquisition company in the oil and gas exploration field needed to track a few dozen vehicles by centrally collecting GPS data as the vehicles traveled throughout remote arctic tundra.

Solution:

NovaRoam was chosen to interface with GPS receivers in each vehicle and transmit positioning data to a centralized gateway unit. A special software package would then poll multiple GPS receivers at a preset interval and display all vehicle locations on a single map. Supervisors at the seismic data acquisition company's main office, located thousands of miles away, could then remotely track vehicles in real-time via the Internet for ultimate accountability.

Applications

- ▼ Public Safety Mobile Data
- ▼ Tactical Networking
- ▼ Airborne Communications
- ▼ Maritime Communications
- ▼ Data Collection
- ▼ Remote Sensors
- ▼ Disaster Management
- ▼ Vehicle Tracking (AVL)



Ground-Air-Ground Communications

Problem:

A contractor for the US military needed to reliably communicate sensor data from ground-based locations to passing aircraft above.

Solution:

Versatility is one of NovaRoam's main benefits. With ad hoc mesh networking technology, NovaRoam quickly creates adaptable, self-healing wireless networks ideal for highly dynamic environments. After evaluating a number of alternatives, the customer chose NovaRoam based on its ability to automatically and rapidly establish mesh networks and transmit large volumes of data in very short periods of time. Further, NovaRoam's security features ensured that sensitive data would be safeguarded from potentially hostile users. With NovaRoam now installed, the contractor has a cost-effective data pipeline for this specialized mobile application.

SCADA

Problem:

For its deployment of an Intelligent Transportation System (ITS), the Indiana Department of Transportation (INDOT) required a long-range data communication system to network remote roadway sensors that were scattered around Indianapolis' I-465 circle freeway.

Solution:

Following an extensive search of available wireless technology, INDOT chose the NovaRoam Mobile Router based on its proprietary mesh networking technology, impressive communication range, abundant throughput and stringent security. INDOT now has a flexible wireless network with fault tolerance and survivability which helps ensure critical sensor data reaches the decision center quickly and in its entirety.

Remote Sensor Communications

Problem:

Satellites have been the communication medium of choice by the US military to provide non-line of sight data communication links. As reliable as satellite is, there are a number of drawbacks to this approach; most notably, the high cost and the limited availability of satellite communications for transmission. One particular group in the Army needed a suitable alternative to satellite.

Solution:

NovaRoam, with its far-reaching and near-line of sight communications capabilities, has been adopted by a number of customers as a substitute to satellite communications. This particular group chose NovaRoam to provide the wireless data backhaul for remote sensors that were spaced several miles apart rather than relying on satellite. Now, the Army is able to remotely relay field sensor data on-demand and in a cost-effective manner using a COTS platform.

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