

## Case Study: Project Seahawk

### A Formidable Challenge

The Sept. 11, 2001 terrorist attacks on the United States set in motion many intensive efforts to increase national security. Of particular concern was the vulnerability of the nation's seaports. In 2003, Congress created a special pilot project within the Department of Homeland Security that came to be known as the Project SeaHawk Task Force.

A major challenge facing the task force was the need to rapidly deploy an operational, secure wireless network that would provide reliable communication for mobile members of the team on both land and water. Once Red River was awarded the project, the Task Force requirements were augmented to include a wireless network that is easily scalable for increased through-put when needed; as well as, the ability to seamlessly roam between the secure wireless network and public cellular networks.

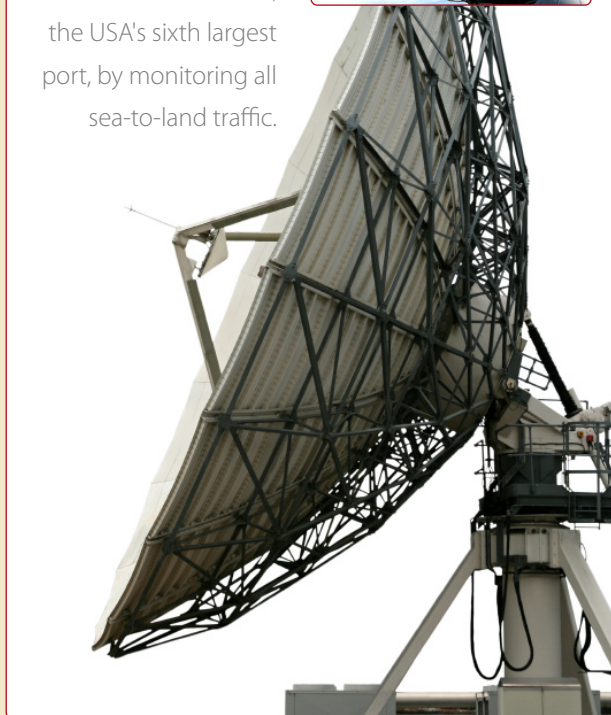
Additionally, the network had to reliably send voice, data and radiological images to the SeaHawk Operations Center. Compounding the difficulty of the endeavor was the "low country" terrain that makes up much of the Charleston area, a topography that doesn't lend itself to easy equipment installation or consistent radio signal strength.

### Red River Rises to Meet the Challenge

After a thorough review of prospective providers, the task force chose Red River for the ambitious project. Red River, a global provider of technology solutions for agencies of the U.S. Government, had the ability to secure the potentially difficult "buy-in" from the dozens of separate agencies involved, which would ensure the project would be brought online as smoothly as possible.



Project SeaHawk, the US's first collaborative port security effort, combined 47 federal, state and local agencies. Its solitary mission was protecting and securing the Port of Charleston, the USA's sixth largest port, by monitoring all sea-to-land traffic.



"This project began with the creation of the wireless network and mobility functions," said Dan McGee, VP of Operations at Red River and lead project manager. "The project was time-sensitive and they wanted the flexibility of working with a nimble, but accomplished solution provider that could quickly develop and execute a plan." The Seahawk managers' experience with larger integrators was that too much time and money was spent before any progress was made. As it turned out, Red River's agility and problem-solving tenacity went a long way toward making Project SeaHawk a success. There were numerous design changes and on-the-ground issues that required quick but prudent decisions.

For example, after the original mobile network was created, "the fixed equipment requirement was changed because they learned they needed to be able to move equipment from one boat or vehicle to another," said McGee. Creating these portable, transferable kits was one of the toughest challenges for Red River. Each kit, built from scratch, included a Cisco mobile router, a small switch, and an Alvarion wireless radio - all housed in a case that could be quickly bolted and unbolted from various boats, cars and trucks.



## Innovative Solutions for Unique Challenges

"Our design process evaluated many iterations to achieve the small footprint," McGee said. "Once completed, we learned of a new requirement - the ability to roam off-network and send data and voice back to headquarters. This presented the greatest challenge yet," recalled McGee. "Our solution was a custom configuration that included a cellular card and a GPS device integrated into the Cisco Mobile Access Router (MAR), which we kitted for them after we determined the optimal compact footprint." To move beyond the prototype case, Red River engaged with Western Datacom to provide enhanced design and engineering assistance. Western Datacom also provided the manufacturing facility for the 18 production units requested by SeaHawk.

The Charleston port is actually below sea level, and the fact that Charleston is prone to hurricanes proved to be a challenge that required innovative thinking. "There are line-of-sight and non-line-of-sight issues with wireless," McGee said. "You always have to overcome those. In terrain that has hills and mountains or high buildings, it's a little easier because you can get elevation." Red River designed a 120-foot-tall monopole antenna as well as a 150-foot-high tower at the Project SeaHawk command center that could withstand hurricanes and provide the elevation necessary to hang critical radio gear. Red River partnered with PCS Technologies, a company that specializes in cellular tower construction in the Midwest for the project.

## Red River Helps Project SeaHawk Protect the Port of Charleston

Red River had its mettle tested as an innovator and problem-solver when it was called upon to serve as general contractor for a unique and complex Department of Homeland Security project. Red River met the challenge and successfully created a communication system that brought vital protection to one of the United States' most important ocean ports.

Within 6 months, Project SeaHawk's unique communications system went online. Because of Red River's agility and level of service, the project was expanded for an additional 2 years. The success of the project is a testament to the vision of the Project SeaHawk team and to Red River's ability to rapidly solve problems, collaborate with multiple parties and develop unconventional solutions when off-the-shelf equipment is not available.

