4TH STRYKER BRIGADE ACHIEVES COMMUNICATIONS MOBILITY WITH WAVE™

WAVE ENHANCES SITUATIONAL AWARENESS AND TACTICAL COORDINATION

The U.S. Army wanted a leaner, more agile force. Their top priorities were rapid deployment over long distances and quicker movement of infantry to the battlefield. The 4th Stryker Brigade Combat Team, 2nd Infantry Division epitomized the challenge. The very mobility and flexibility that defines Stryker operations also highlighted the shortcomings of existing hardware-based communications systems. In order to complete the mission and protect its soldiers, 4th Stryker chose to deploy WAVE.

THE CHALLENGE

The 4th Stryker Brigade Combat Team, 2nd Infantry Division is a technologically advanced, tactically mobile unit. Its 4,000 servicemen and women often find themselves at the very frontline of a dynamic and unpredictable battlefield.

With dramatic advances in technology, warfighters have a comprehensive view of the battlefield, with decision-makers close to sources of intelligence. Likewise, command personnel at every level are aware of even the smallest situational changes with increasing immediacy. Lives depend on the timely transfer of accurate information between field and command units.

In the last few years, 4th Stryker advanced its communications capabilities with a tactical operations communication system that allowed field units on

radio networks to communicate directly with command personnel at Tactical Operations Centers (TOCs). Unfortunately, the system relied on non-IP architecture and a series of proprietary hardware components, presenting significant complications and shortcomings that potentially increased the risk to troops and hindered mission success.

Using a hardware-based system required each TOC and field unit to manage multiple pieces of equipment, sacrificing precious agility and creating a great deal of inflexibility in the layout of new positions. This system also demanded significant bandwidth overhead, and its standard switching unit only allowed eight radio networks to interconnect. With each battalion handling up to 12 networks, units were forced to either carry even more hardware, or leave those networks unmonitored.

WAVE SOLUTIONS FEATURES

Mobility & Access Innovations
"Lighten the load" by eliminating rigid, cable-laden footprints at Tactical Operations Centers facilitating better vertical and horizontal communications.

Location Independence
Capitalizes on wireless classified networks and the global prevalence of IP networks to seamlessly connect an unlimited number of users no matter where they are in the world.

System-of-Systems Architecture
Relies on standards-based software to avoid the unnecessary complexity and expense of proprietary hardware solutions and empower unlimited scalability.

Extensive Interoperability
Remove borders, boundaries and limitations by uniting all communication devices regardless of technology, manufacturer, frequency or operator.

Complete Survivability
Provides groundbreaking redundancy and self-healing properties, including autonomous offline operations, peer-to-peer communications and automatic failover.

THE SOLUTION

WAVE software was independently selected and successfully deployed by a number of units throughout the U.S. Army. Based on this mission-tested status and discussions with the WAVE solutions team, 4th Stryker determined that only WAVE could meet their requirements for bridging the gap between radio networks on the battlefield and the established IP networks where higher-echelon decisions are made.

WAVE software capitalizes on the simple power of software to provide a unified network worthy of 4th Stryker's advanced nature. By minimizing the physical hardware load and the equipment footprint within each TOC, frontline war fighters can quickly move from one area of operations to another and establish secure communications even when conventional line-of-sight radio systems are unable to do so.

WAVE software also allows 4th Stryker to achieve secure and reliable unified communications between battlefield networks of differing capability and performance. TOC communications personnel can quickly configure WAVE to support any network type, enabling full communications interoperability across multicast, unicast and mixed-mode networks while keeping bandwidth requirements to a minimum.

At the same time, WAVE offers the ability to connect an unlimited number of users at all levels of the Army's hierarchy, whether across the battlefield or around the world, regardless of their communications device.

Entirely standards-based, WAVE gives the 4th Stryker the vital flexibility to integrate easily with commercial off-the-shelf (COTS) hardware. The brigade chose to build the system using Cisco routers for their superior reliability and resistance to overheating. If necessary, existing hardware-based radio components can also be incorporated into the system, optimizing taxpayer investment.

THE RESULTS

Improved Mobility & Decision Making
Brigade commanders can now monitor, manage and participate in real-time communications from any TOC or in the field using virtually whatever equipment is available, from radio equipment to IP phones and laptops. This allows for faster and more informed decision making before, during and after the mission.

Enhanced Situational Awareness and Tactical Coordination
WAVE is deployed at seven brigade- and battalion-level TOCs monitoring both FM and TACSAT radio networks. It facilitates vertical communication and enables battalions to share network access horizontally with a single click of an icon.

WAVE Proposed as U.S. Army Standard
According to one representative of 4th Stryker, WAVE functionality and quality is so high that a key brigade commander refuses to communicate using any other channels. And after nearly two years of use, 4th Stryker's confidence in WAVE led to a proposal to become the U.S. Army's standard for unified communications technology.

For more information about WAVE, please contact your Motorola representative or visit motorolasolutions.com/wave.

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