Challenge
Military operations are often executed under pressure, when speed is critical. And although communication is essential, it is difficult to establish in many cases. Laying cable, securing the connections, and deploying equipment can be time-consuming, leaving staff without the means to communicate with other functional groups or deployed troops in the field for a number of hours. Furthermore, fixed wired connections can be inflexible and limit user mobility. Wireless technologies can speed network deployments and help military staff and commanders stay connected, while providing the flexibility to move freely within headquarters or at the command post.

Solution
Cisco addresses the need for secure, reliable wireless connectivity in military scenarios with the Cisco® Unified Wireless Network, a wired and wireless solution that delivers industry-leading wireless LAN security and innovation. The Cisco Unified Wireless Network supports real-time, mission-critical applications; creates a secure, mobile, interactive workplace; and delivers robust reliability and high throughput using the 802.11n wireless standard.

Superior Security and Flexibility for Military Deployments
There is a misconception that wireless technology cannot be used in defense scenarios due to security concerns. With Cisco wireless solutions, both 802.11 and 802.16 protocols can be used within a deployed tactical headquarters in both restricted/for-official-use-only networks with commercial-grade encryption and in highly classified networks with military Type 1 encryption.

New security challenges often arise as defense, civilian, and intelligence agencies implement wireless networks to provide anywhere, anytime access to classified resources. Two of today’s leading technology companies, Cisco and Harris, have overcome those factors with a unique and innovative collaboration. By combining Cisco secure wireless products and architectures with the Harris SECNET 54 encryptor, the Secure Wireless Architecture Type 1 solution can be used for deploying classified traffic across unclassified wireless and wired networks.
The Cisco Unified Wireless Solution includes support for dynamic RF management capabilities and mobility services such as voice, flexible guest access, and real-time high-resolution location services. It also features enhanced security with a built-in Intrusion Prevention System (IPS) that supports Network Admission Control (NAC) and helps enable the Cisco Self-Defending Network. The Cisco wireless solution combines confidential communications for information in transit, policy control for a variety of users and deployment scenarios, and robust threat defense to protect information and systems from wireless threats.

Cisco wireless access points are based on Cisco IOS® Software and may optionally operate with the CiscoWorks Wireless LAN Solution Engine (WLSE). Radio and network management features simplify deployment and extend the security, scalability, reliability, and manageability available in wired networks to the wireless LAN. Cisco mobility services are built-in and ready for immediate implementation, an important feature for military deployments.

The military can use a Cisco Unified Wireless Network to achieve:

- **Rapid deployment**: Communications within headquarters and between headquarters and command posts can be established in minutes rather than hours.
- **Reduced payload**: For wireless augmented deployments, the amount of cable to be deployed into the field is reduced.
- **Optimized staff productivity**: Headquarters operational staff can commence networked collaboration within a few minutes of deployment.

- **Increased mobility**: Allows flexible options for deploying communications in an enclosed environment.
- **Rapid headquarters deployment**: Communications within headquarters and between headquarters and command posts can be established in minutes rather than hours.
- **Headquarters deployment augmentation**: Wireless technology makes it easy to establish an immediate LAN connection between functional areas and the communications command post, server, vehicle, or shelter and connect them to critical IT resources while the permanent C4I network cable is being installed.
- **Network range extension**: The range of the network can be extended using Cisco wireless technology in scenarios where functional groups are separated by many kilometers. Here, a directional antennae can transmit signals across a significant distance.

**Defense Applications**

Cisco Unified Wireless Solutions can improve operational capability in defense scenarios:

- **Rapid headquarters deployment**: Wireless connectivity can be rapidly deployed, so users in functional workgroups have wired access to each other within command posts, and wireless connections between command posts.
- **Rapid headquarters deployment to mobile users**: The Cisco solution adds wireless connectivity for functional groups, which enables untethered communications within the headquarters.
- **Headquarters deployment augmentation**: Wireless technology makes it easy to establish an immediate LAN connection between functional areas and the communications command post, server, vehicle, or shelter and connect them to critical IT resources while the permanent C4I network cable is being installed.
- **Network range extension**: The range of the network can be extended using Cisco wireless technology in scenarios where functional groups are separated by many kilometers. Here, a directional antennae can transmit signals across a significant distance.

For More Information

Learn more about wireless communications for defense operations and other global government solutions and services for defense at [http://www.cisco.com/go/defense](http://www.cisco.com/go/defense).