

# Cisco Wireless Location Services: Real-Time Network Visibility

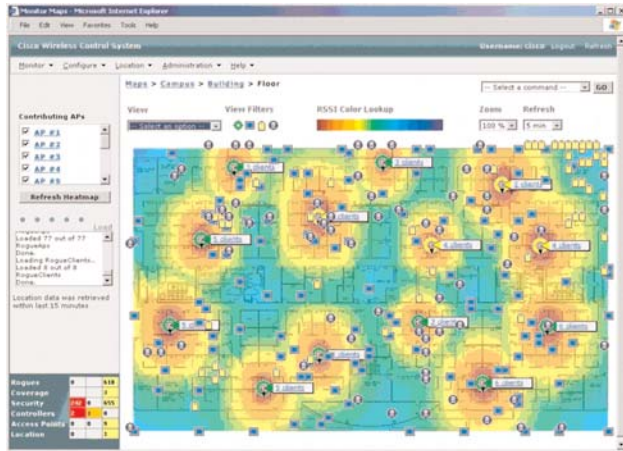
## At-A-Glance

### Why Should I Care About Wireless Location Services?

Cisco Systems® easy-to-deploy wireless location services are a mobility service of the Cisco Unified Wireless Network. Cisco wireless location services simultaneously track thousands of Wi-Fi devices from directly within the wireless LAN infrastructure. Real-time tracking of Wi-Fi devices increases asset visibility, enhances network security, simplifies network management, and tightens control of the RF environment.

Deploying location services brings visibility to critical applications, such as high-value asset tracking, IT management, location-based security, and business policy enforcement. With location services, an organization can track the physical location of a variety of Wi-Fi devices—including laptops, voice handsets, PDAs, active Wi-Fi RFID tags, rogue client devices, and rogue access points—to within a few meters (Figure 1).

**Figure 1. Accurately Pinpoint a Wi-Fi Device's Location**



### What Problems Need to be Solved?

Organizations need real-time visibility of the RF environment and Wi-Fi devices to enhance WLAN security, control, and performance. They need to maximize their existing WLAN infrastructure investment with cost-effective technologies that improve business operations and reduce operational expenses.

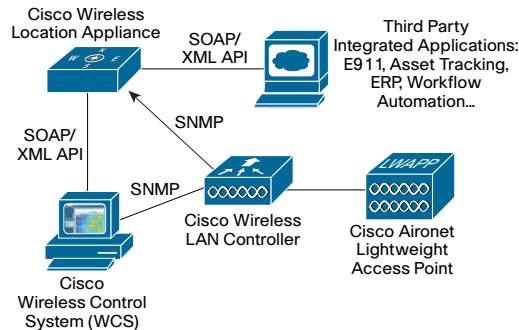
Organizations are deploying location services to address the following business requirements:

- Prevent loss or theft of valuable mobile assets
- Workflow automation, inventory management, and device or people tracking
- Telemetry to relay information about a device directly to business applications
- Rapidly locate security threats, such as rogue access points and rogue client devices
- Voice over WLAN (VoWLAN) for Enhanced 911 (E911) applications to identify the location of a distressed caller

### Wireless Location Services

Wireless location services are delivered by the Cisco® Wireless Location Appliance in conjunction with the Cisco Wireless Control System (WCS), Cisco wireless LAN controllers, and Cisco Aironet® lightweight access points. Cisco wireless location services use the same Cisco lightweight access points that deliver WLAN traffic to serve as location “readers” for 802.11 wireless devices, clients and Wi-Fi tags. (Figure 2)

**Figure 2. Cisco Wireless Location Services**



**Cisco Wireless Location Appliance**—The Cisco Wireless Location Appliance is an innovative, easy-to-use solution that uses Cisco’s advanced RF fingerprinting technology to simultaneously track thousands of 802.11 wireless devices. This appliance is integrated directly into the WLAN infrastructure to extend the value and security of the existing WLAN by making it “location-aware.”

**Cisco WCS**—The Cisco WCS simplifies WLAN operations by allowing IT managers to design, control, monitor, and manage enterprise WLANs from a centralized location through an easy-to-use GUI. The Cisco WCS manages the Cisco Wireless Location Appliance and displays location information.

**Cisco Wireless LAN Controller**—Cisco wireless LAN controllers are responsible for systemwide wireless LAN functions, such as security policies, intrusion prevention, RF management, quality of service (QoS), and mobility.

**Cisco Aironet lightweight access points**—Cisco lightweight access points deliver secure wireless access to any Wi-Fi compliant IEEE 802.11a/b/g client device.

**Figure 3. Wi-Fi Client Devices**



### What are the Benefits of Wireless Location Services?

Wireless location services are deployable in a wide variety of environments and situations across multiple industries, including healthcare, finance, retail, manufacturing, and federal organizations.

Location services can be used for enhanced network visibility, Wi-Fi device tracking, workflow automation, inventory management, advanced WLAN security, network control, RF capacity management, telemetry, and VoWLAN services.

Location services deliver tangible benefits to enterprises running business-critical wireless LANs, including:

- Increased real-time accuracy, through RF fingerprinting, in locating a Wi-Fi device.
- Location-based alerts that can be proactively sent based on device movement, device absence, and zone entry and exit of tracked devices.
- Scalability to thousands of wireless clients and Wi-Fi tags.
- Flexibility to track any 802.11 Wi-Fi clients.
- Rapid deployment via “out-of-the-box” RF models and predictive technology.
- Centralized quick and easy explorer-like browsing of all devices across different geographies, campuses, buildings, floors, and areas.
- Low total cost of ownership and transparent integration that uses the existing Cisco WLAN network infrastructure.

### Why Cisco?

In addition to the many benefits listed above, Cisco wireless location services include a rich and open API that integrates with a spectrum of technology and application partners. This integration supports the deployment of powerful location-based applications, such as E911 services, asset management, and workflow automation.

Many Cisco partners offer specialized location services that integrate with the API of the Cisco Wireless Location Appliance, including PanGo, AeroScout, Appear Networks, and G2 Networking.

The Cisco Unified Wireless Network is the industry’s only unified wired and wireless solution to cost-effectively address the WLAN security, deployment, management, and control issues facing enterprises. This powerful solution includes innovative RF capabilities that enable real-time access to core business applications and provides proven enterprise-class secure connectivity. The Cisco Unified Wireless Network delivers the same level of security, scalability, reliability, ease of deployment, and management for wireless LANs that organizations expect from their wired LANs.

Learn more by visiting <http://www.cisco.com/go/unifiedwireless>.