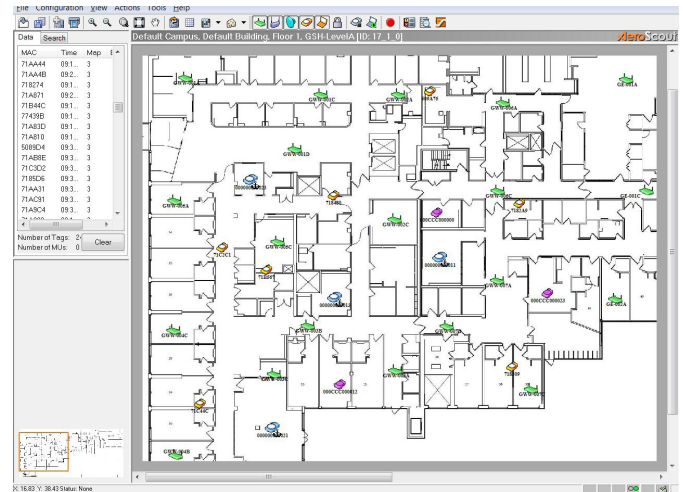## Overview

AeroScout Engine is a software layer of the AeroScout Visibility System, which delivers Unified Asset Visibility applications to healthcare, manufacturing and other industries. The AeroScout Engine receives information from Wi-Fi-based Active RFID Tags and standard Wi-Fi networking devices, and applies multiple complex algorithms to produce highly accurate and reliable location and status data in both indoor and outdoor environments. The sophisticated processing abilities, multiple visibility modes and WLAN compatibility of the AeroScout Engine make it a key component of the most complete and scalable Visibility solution on the market.

AeroScout Engine is the only location source to provide:

- Indoor & Outdoor visibility
- RSSI and TDOA
- Choke-Point detection
- Accurate, reliable Wi-Fi-based Active RFID
- Automatic Calibration

Key Benefits

- **Unified Asset Visibility to suit all needs:**
  AeroScout Engine uniquely processes multiple forms of wireless location and status data over a single, unified infrastructure: accurate real-time location indoors and outdoors, presence detection, choke-point visibility, sensor capabilities and more.

- **Standard Wi-Fi infrastructure:**
  The AeroScout system utilizes standard wireless networks, keeping costs low and enabling enterprises to gain more benefit from their existing WLAN. Through integration between the AeroScout Engine and all major enterprise WLAN providers, customers can use standard Wi-Fi access points as Active RFID readers to determine location and status – no additional hardware is needed.

- **Visibility of any valuable asset:**
  AeroScout Engine's advanced algorithms offer the industry's most accurate asset location determination. Small, battery-powered AeroScout Tags can be used to track people and a variety of assets and equipment, and standard Wi-Fi client devices such as laptops and PDAs can be located as well.

- **Integrated sensor and telemetry capability:**
  AeroScout Engine processes sensor data received wirelessly from AeroScout tags. Built in options include motion, temperature, humidity and voltage sensors. Wired device telemetry capabilities also exist, using a tag interface, extending wireless communication of a wide range of status information to devices without inbuilt wireless functionality.

- **Enterprise software for asset tracking:**
  AeroScout Engine interfaces directly with AeroScout's MobileView application platform for delivering and integrating enterprise-class visibility applications.

- **Accurate, reliable indoor and outdoor location:**
  AeroScout uniquely provides real-time location based on both Time Difference of Arrival (TDOA) and Received Signal Strength Indication (RSSI) methods. This enables accurate location determination in both indoor and outdoor environments, from corporate office buildings to open industrial areas.

- **Advanced visibility capabilities:**
  In addition to Wi-Fi based real-time location, AeroScout Engine can process a variety of other location and visibility data. This includes immediate choke-point detection using AeroScout Exciters, as well as outdoor location based on GPS technology. These capabilities enable a wide range of applications to meet specific industry and customer needs.
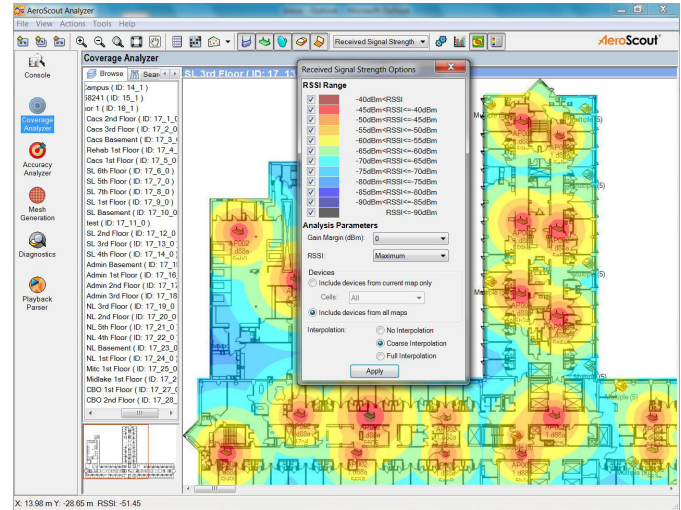
Key Functionality

Location Determination

- Processing and analysis of signal strength, time-of-arrival and presence data returned from standard Wi-Fi Access Points or AeroScout Location Receivers.
- Patented dynamic online synchronization scheme to ensure accuracy.
- Patented multi-path reduction algorithms that significantly reduce errors from signal reflections.
- Floor separation capability for multi-floor installations.
- Industry's leading proven Wi-Fi location accuracy, typically 3-5 meters (RSSI & TDOA), depending on the environment.
- Fully integrated and tested with all major enterprise WLAN systems, with no proprietary upgrades required.
- Automatic calibration functionality delivers constantly improving location accuracy as well as providing real-time adjustment to physical changes in the monitored zone.

Management

- Centralized management, analysis and configuration of multiple applications and visibility modes and all AeroScout hardware.
- On-demand location request processing for client applications.
- Event management tool for configuring system and application level events, including alerting and notification.
- Intuitive graphical user interface (GUI) for management of asset location and presence data.
- Map import and setup functions.
- Centralized wireless firmware upgrades to infrastructure devices.

Additional Features

- AeroScout Analyzer sophisticated software tool for analysis of location accuracy, Wi-Fi coverage and system diagnosis.
- Ability to process sensors, telemetry and other advanced data retrieved and transmitted by tags.
- Graphical installation tool for easy, intuitive system setup and performance management.
- Easy integration with existing and custom context-aware applications.

- Ability to remotely trigger tag identification (making LED blink, etc.)
- High-availability failover mechanism.

Engine Components

- **Positioning Server:**
  The central server processes positioning data with multiple visibility modes, and communicates with infrastructure devices.
- **System Manager:**
  Installation, administration and configuration is centralized in the AeroScout System Manager and allows importing a variety of map file types, the setup of the system topology and remote configuration of system components.
- **AeroScout Analyzer:**
  The AeroScout Engine includes a set of sophisticated graphical tools for system design, planning and analysis.

Minimum System Requirements:

- OS: Windows 2008 server 64bit, Windows 7, 64bit
- CPU: Intel® I3 processor or higher
- Memory: 8 GB RAM or more
- Ethernet: Standard Ethernet network interface card
- Microsoft DirectX v9.0 or higher

Ordering Information

For ordering and pricing information, contact AeroScout at info@aeroscout.com

Contact Info

AeroScout

1300 Island Drive, Suite 202
Redwood City, CA 94065
Tel: +1–650–596–2994
Fax: +1–650–596–2969
Email: info@aeroscout.com
Web: www.aeroscout.com

STANLEY Healthcare

ENG 4.5 0613   06/13

US patent: 6,963,289   US patent: 7,552,049 B2   US patent: 7,403,108 B2