Customizable Wireless Management System

An Element Management System (EMS) is a necessity for the management of today's multi-technology wireless network.

EMS helps network operators to significantly reduce the complexity of Operations, Administration and Maintenance (OAM) tasks, through centralized administration of network equipment. Besides from managing Fault, Configuration, Accounting, Performance, and Security (FCAPS), the dynamic nature of the RF environment poses additional challenges, such as interference and coverage hole issues, for managing a wireless network.
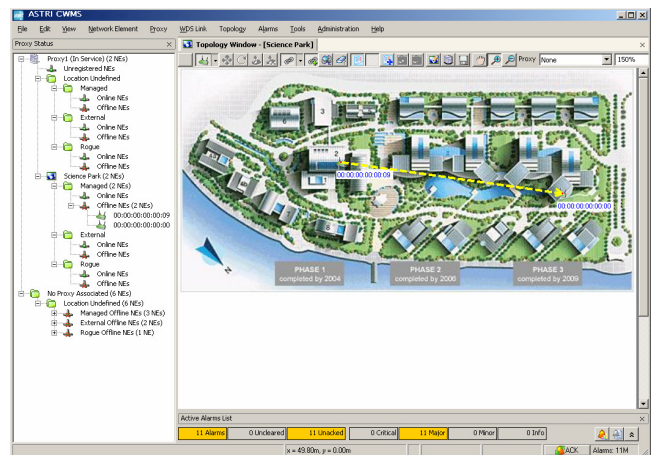
What is ASTRI CWMS?

ASTRI Customizable Wireless Management System (CWMS) is an Element Management System for managing 802.11 (WiFi) and 802.16 (WiMAX) wireless networks. ASTRI CWMS is fully customizable to support network equipment from any vendor: an ideal solution for equipment vendors to obtain EMS capability. Featuring FCAPS and advanced management features, ASTRI CWMS provides network operators with a detailed and user-friendly GUI for monitoring and optimizing wireless networks.

ASTRI CWMS Benefits

For Equipment Vendors

The rapidly growing Wireless Access Market creates a huge demand and great opportunities for the vendors to deploy their equipment in volume. To provide a complete solution, one needs to bundle the equipment with an EMS. However, developing an in-house, stable and reliable feature-rich EMS to meet the customers' requirements could be time and labor consuming.

With ASTRI CWMS and our R&D achievements, the vendors are no longer required to reinvent the wheel nor invest much R&D effort to have a EMS. Instead, we provide customization for their equipment, so that they can centralize their engineering resources in core development activities, facilitating the launch of quality products as another milestone.

For Network Operators

ASTRI CWMS supports multiple wireless standards: WiFi and WiMAX. It allows you to manage a network consisting of different types of wireless network elements from multiple vendors.

The RF monitoring features of ASTRI CWMS will simplify the job. The features of performance monitoring and service assurance allows operators to make the critical decisions involved in tuning and optimizing your wireless network. The real-time fault management feature of ASTRI CWMS will promptly alert you of the service-affected failures. The graphical indicators precisely pinpoint the locations of failure so that problems can be rectified as soon as possible.

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ASTRI CWMS Features

Configuration Management
- Centralized Network Element (NE) configurations with template-based mass provisioning
- Configuration consistency check (ensures NEs are configured properly)
- Scheduled/On-demand NE firmware update

Network Element Discovery
- Automatic NE discovery
- Automatic determination of NE models, firmware versions and hardware configurations

Monitoring and Fault Management
- Real-time status and alarm monitoring
- Monitoring based on Service Schedule
- Alarm synchronization
- Alarm history export (text, csv)
- Alarm summarization and filtering

Topology & Location Management
- Supports indoor and outdoor (GPS) maps and NE locations
- Supports hierarchical maps
- Logical Topology

System Security
- Role-based access control for CWMS users
- Configurable access control on CWMS functions and accessible groups of NEs by administrators
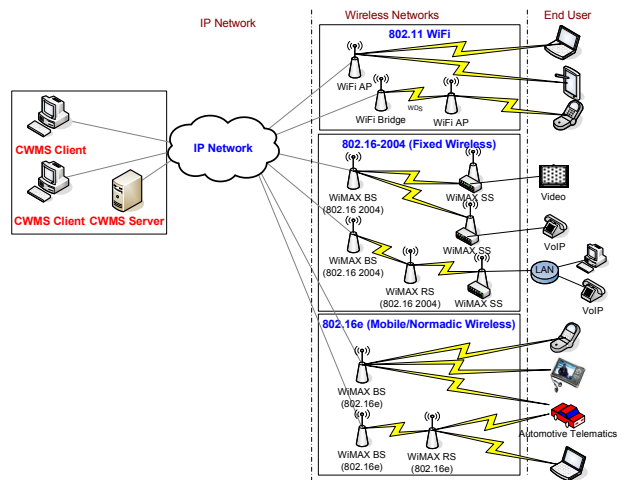
Performance Reporting & Monitoring
- Customizable performance reports, such as Network inventory report, NE Performance trending, NE alarm trending
- Scheduled/on-demand report generation

User Interface
- User friendly GUI
- Secured remote administration via Secured Socket (SSL)
- Supports multiple simultaneous users
- Multi-language (English, Simplified Chinese, Traditional Chinese), selectable when user login

WiFi Management
- Wireless Distribution System (WDS) Link Management: discover, configure and status monitoring of wireless links
- Wireless coverage maps showing estimated Access Points (APs) coverage
- Automatic neighboring and rogue APs detection
- Automatic intelligent frequency assignment

WiMAX Management
- WiMAX Base Station & CPE Management (802.16-2004 and 802.16-2005)
- WiMAX Service Flow & QoS Provisioning and Monitoring
- WiMAX Subscribers Service Activation
- Fixed WiMAX (802.16-2004) Link Management: discover, configure and status monitoring
- Wireless coverage maps showing estimated WiMAX Base Stations coverage
- Advanced RF monitoring to detect and report potential RF problems

Wireless Client Management
- Showing and searching associated wireless clients for each AP/Base Station
- Data for each wireless client: MAC address, signal strength, online time…

Platform Specifications
- SNMP standard based
- Supports Oracle/MySQL Database
- Java-based multi-platform (Solaris/ Windows XP/ 2000)

Customization Service
- Quick customization service, supports new model of WiFi/WiMAX NEs with core FCAPS features (with NE's SNMP MIB files provided)
- Feature customization by request is welcomed and negotiable

System Performance and Scalability
- Scalable architecture for network with a dozen to thousands of equipment

Northbound Interfaces
- Standard or Custom interfaces

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