AirMagnet Survey

AirMagnet Survey is ideal for planning and designing 802.11 a/b/g/n wireless LANs for optimal performance, security and compliance. It calculates the ideal quantity, placement and configuration of APs for a successful WLAN deployment.

AirMagnet Survey goes beyond just verifying RF coverage, by plotting actual end-user network performance in terms of connection speed, throughput and packet statistics. The end result is a complete Wi-Fi "weather map" of all critical RF and end-user performance metrics.

Advanced features allow users to integrate with professional spectrum analyzers, model pre-deployment scenarios, generate customized survey reports, perform outdoor surveys, conduct voice surveys, verify end-user network requirements, and do detailed end-user capacity planning.

AirMagnet Survey delivers fast, scientifically accurate site surveys for any 802.11a/b/g/n/4.9 GHz indoor and outdoor wireless network. This revolutionary software automatically gathers critical Wi-Fi and RF spectrum information from your enterprise network using multiple data collection methods, including real-world measurements, and generates detailed Wi-Fi performance maps of the results for easy network deployment, capacity planning and optimization. AirMagnet Survey is available in "Express" and "PRO" versions. AirMagnet Survey Express offers a lighter version of the solution that allows users to perform the basics of Wi-Fi site surveying with ability to map out signal, noise and even user performance. AirMagnet Survey PRO extends those capabilities found in the Express version and adds powerful, industry-defining features including 802.11n deployments, multi-floor deployments, outdoor surveys, network design verification, voice readiness verification and surveys, RF spectrum analysis, and many more.

Unmatched Analysis
Real World Performance
Unlike other solutions that rely only on passively collected data such as signal strength, AirMagnet Survey allows users to perform active/Iperf surveys to ensure a superior site survey. During an active/Iperf survey, AirMagnet Survey associates to an AP to test the real quality of the connection. This allows surveyors to see how real world clients will perform at specific locations in terms of WLAN throughput, connection speed, retry rates, and packet losses. ***Note:*** *Iperf available in PRO version only*

Strategic Wireless LAN Design

Simulation and Optimization

After a survey, users can simulate a variety of changes to the network and preview the impacts. This includes changing AP transmit power, channel, SSID settings or the addition of environmental noise. Users can also simulate moving APs to new locations and preview the effect of adding additional APs. AirMagnet Survey powers users with an automated channel plan for APs that avoids interference and over-allocation.

Detailed Analysis

AirMagnet Survey automatically displays survey results on a map of your location, providing unlimited options for visual analysis.

Complete view of wireless statistics – View the distribution of Signal, Noise, Signal/Noise, WLAN throughput, PHY data rates, Retry Rates, and Packet Losses.

Interference analysis – Measure the total cumulative interference from all sources that can impact the performance of your APs.

View by channel, SSID, or device – Sort results based on SSID or channel to easily balance RF issues against VLAN and service level requirements.

Overlap and roaming analysis – Instantly see areas of over-provisioning or where clients are prone to consistent roaming or "thrashing" between APs.

Simulate wireless adapters – Take an existing survey and view exactly how another Wi-Fi adapter would view the survey environment.

Simultaneous site surveying

AirMagnet Survey's simultaneous multiple surveying capability, that leverages multiple adapters plugged into the same PC, provides users with the industry's best solution to emulate real-world client behavior (using active and Iperf surveys) and at the same time reduce site surveying time, effort and cost by half. For example, users can perform active surveys and passive surveys simultaneously or across multiple spectrum bands, such as a 2.4 GHz and 5 GHz survey.

Visualize Coverage Differences Over Time

AirMagnet Survey's Diff View feature allows side-by-side visualizing of differences between two separate surveys. This helps show how a site's wireless environment has changed over time. Likewise, users can use this feature to quickly compare AirMagnet Planner results with actual site survey results.
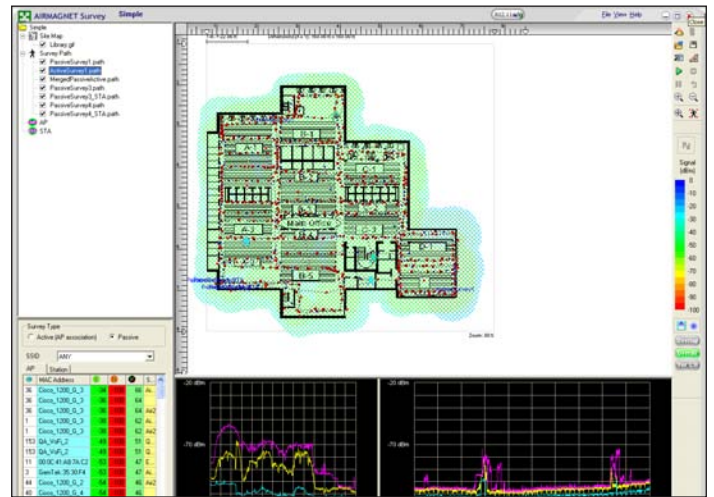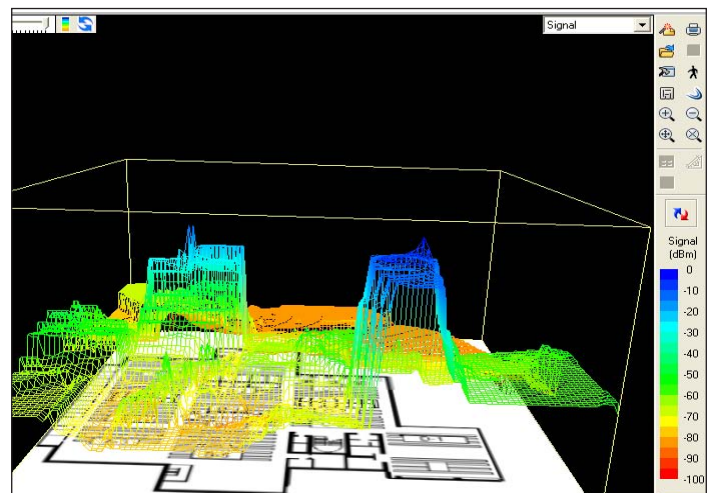

Figure 1: Survey view

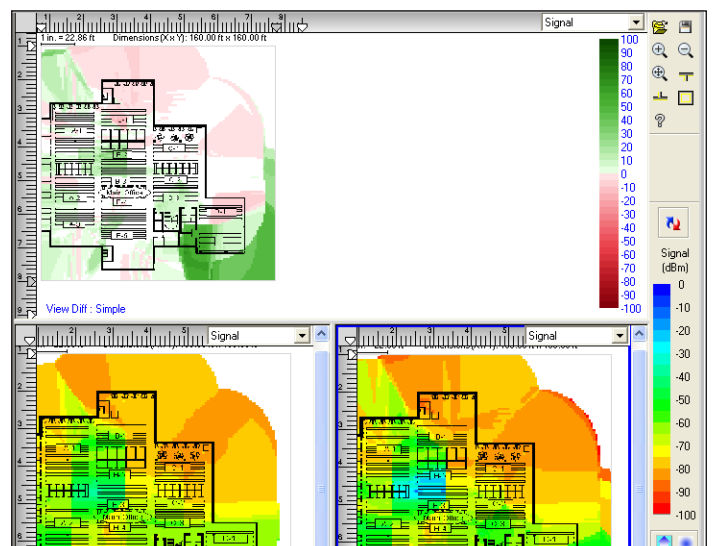**Figure 2:** 3D view to visualize highest/lowest signal

Figure 3: Diff view to compare surveys

Establish a secure network

To ensure the highest level of security in a WLAN, AirMagnet Survey designs the network to minimize RF spillage outside the corporate building. This spillage should be kept to a minimum, unless service is to be provided in the parking lot or an outside area. With AirMagnet Survey, users can also locate unauthorized or performance intensive stations detected during a survey on the floor map.

AirMagnet Survey PRO

AirMagnet Survey PRO contains all the functionality of the "Express" version plus an additional set of features tailored to the needs of the wireless expert. Additional features include:

802.11n Site Surveys

AirMagnet Survey includes the industry's only 802.11n Iperf & Active surveys that take into account the real-world impact of multi-path encountered at each individual location to actively test both uplink and downlink performance of the 11n network. AirMagnet Survey PRO includes built-in coverage maps that are specific to 802.11n networks, such as Operating Mode coverage map, MCS Rate Transmit/Receive coverage map and the Channel Width coverage map.

Voice-over-Wi-Fi Surveys

AirMagnet Survey addresses challenges faced by network installers and IT staff while deploying VoWLAN networks, and powers them with a built-in voice readiness verification system (includes pre-configured support for Cisco 792X phones and Vocera badges, plus the option to add profiles for other vendors) that allows users to ensure that their network design is in-line with the recommendations of the phone vendor, and also allows them to perform real-world voice surveys. With the industry's first voice survey capability, users can validate and plot the phone call quality, capacity and other voice specific parameters at every location on a floor map, to help identify and minimize issues that may be causing low call quality.

Coverage maps that are built specifically for voice networks, including, WiMOS score or call quality, number of active calls, phone roaming zones (includes roaming statistics), channel utilization, retries and many more, are included in the application and allow users to design the voice network to ensure the highest performance. *Note: Ability to perform voice surveys requires AirMagnet VoFi Analyzer PRO to be installed on the same machine as AirMagnet Survey PRO.*

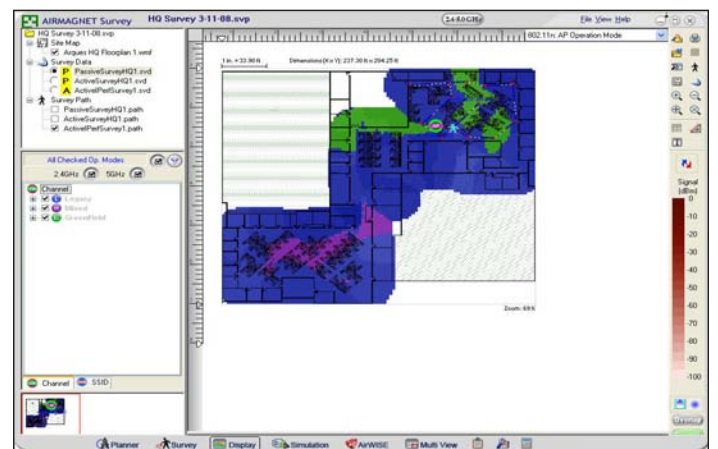**Figure 4:** RF spillage outside the corporate building

Figure 5: 802.11n Operation Mode coverage map

Figure 6: Voice call quality coverage map

Simultaneous Site Surveying

AirMagnet Survey's simultaneous multiple surveying capability, that leverages multiple adapters plugged into the same PC, provides users with the industry's best solution to emulate real-world client behavior (using active and Iperf surveys) and at the same time reduce site surveying time, effort and cost by half. For example, users can perform simultaneous passive and active surveys or across multiple spectrums (2.4 GHz and 5 GHz).

Integration with Spectrum Analyzers

Before making any design and deployment decisions, it is important to account for RF interference from non Wi-Fi devices. Users who own AirMagnet Spectrum XT, AirMagnet Spectrum Analyzer, Fluke Networks AnalyzeAir or Cisco Spectrum Expert applications can collect both Wi-Fi and spectrum analysis data in a single survey. With this integration, users can visualize the RF energy at any location and identify and display the presence of non-802.11 devices interfering with the WLAN. Users also have the ability to visualize the average power level in the RF spectrum for each channel at any given point on the map. *Note: AirMagnet Survey PRO must be installed on the same machine as the users' spectrum application.*

Figure 7: Wi-Fi and non Wi-Fi data in a single survey

Multi-Floor Deployments

AirMagnet Survey users can look at multiple floors of a single building to see if AP signals are bleeding to adjacent floors. This gives users the ability to design their network to reuse services of a single AP across multiple floors in order to lower equipment and deployment costs.

AirWISE® for Site Surveys

The AirWISE® engine lets users set design requirements for their network and immediately identify any problem areas. Users can quickly test the network against a variety of criteria and get expert advice on how to resolve any problems. The capacity planning section allows surveyors to account for the number of end users the WLAN will need to support.

Figure 8: Customize survey reports

Professional Reporting

AirMagnet Survey PRO includes a completely integrated reporting module that can instantly create custom outputs of site surveys and simulations. Additionally, customized templates provide users with the flexibility in terms of creating reports that vary based on project requirements. Reports can be output in over 15 formats including PDF, XML, HTML, Excel and Word.
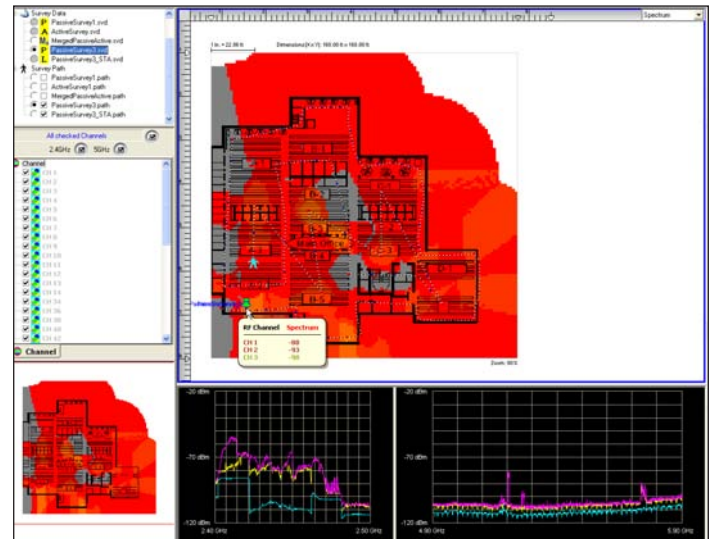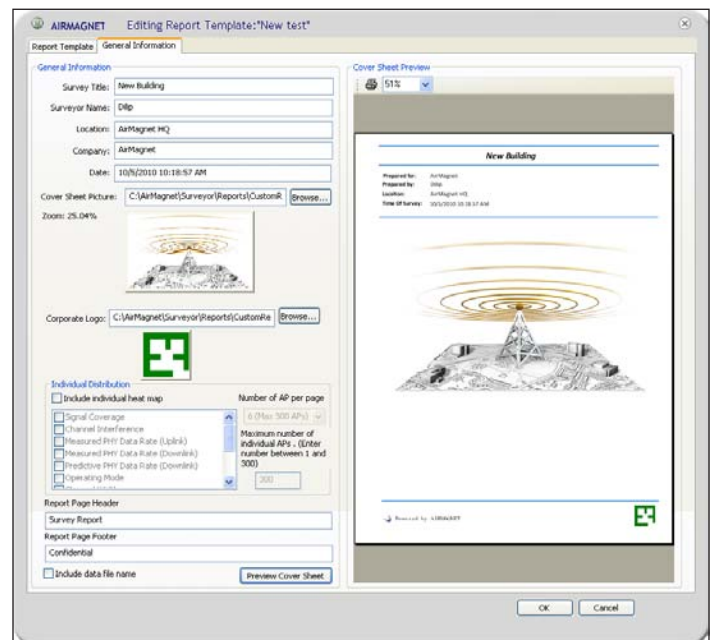
Outdoor Surveys

With the combination of GPS support, 4.9 GHz support and integration with Google Earth, Microsoft® MapPoint and Microsoft® Virtual Earth, AirMagnet Survey PRO provides a clear path to fast, fully automated outdoor surveys. Users can leverage their NMEA compliant GPS device to automatically collect outdoor wireless data. The results can then be analyzed in the AirMagnet Survey user interface or exported into Google Earth.

Integration with AirMagnet Planner

AirMagnet Planner is built into AirMagnet Survey PRO, providing a single, seamless application with the industry's most complete approach to wireless LAN design, deployment and ongoing optimization for 802.11a/b/g/n networks. With this integrated solution, users can use AirMagnet Planner to accurately design their WLANs and plan for speed, then validate the results with real-world data in AirMagnet Survey PRO. Using active end-user performance metrics, users can further perfect their planning models over time. No other solution combines state-of-the-art predictive modeling with real-world performance data. Users also gain additional planning capabilities with the ability to test network plans against the AirWISE® engine for design requirements.

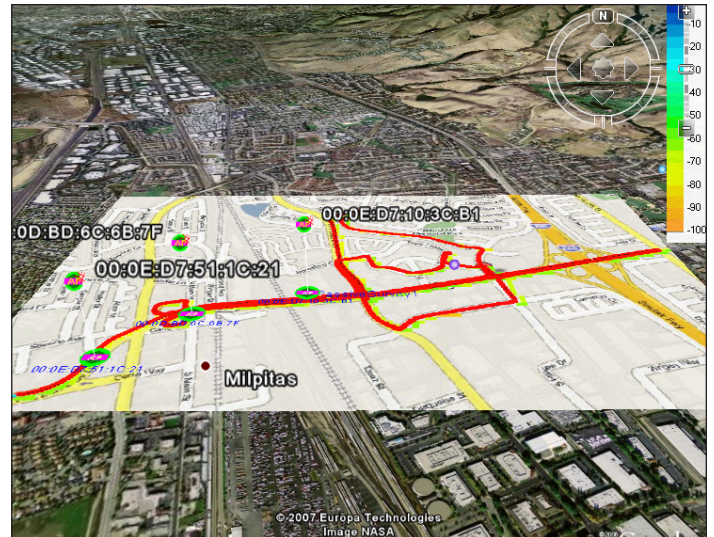AirMagnet Planner also integrates with AirMagnet Survey Express.

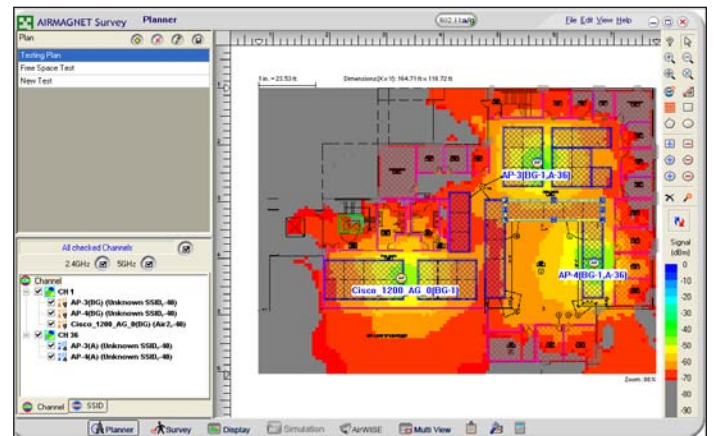**Figure 9:** Google Earth integration for outdoor surveys

Figure 10: Automated WLAN modeling using AirMagnet Planner

Product Facts

Product	Part Number
AirMagnet Survey PRO (Incl. Planner)	AM/A4018
AirMagnet Survey Express	AM/B4010
AirMagnet Survey Express to Survey PRO (upgrade model)	AM/A4016-UGD
AirMagnet Planner Module for existing A4015 customers	AM/A4013-UGD
AirMagnet Spectrum XT (optional)	AM/B4070
AirMagnet Multi-adapter kit for Survey (US, World Mode and Japan versions available)	AM/C1095

Minimum System Requirements

Microsoft® Windows 7 Enterprise/Business/Ultimate/Professional or Microsoft® Windows Vista™ Business/Ultimate (SP1) or XP™ Professional (SP3)/ Tablet PC Edition 2005 (SP3) or MAC OS X Leopard™ (Apple® MacBook® Pro running Windows XP™ PRO with SP3 using Boot Camp®). Note: 64-bit Operating System supported on Windows 7 for 802.11a/b/g/n USB adapters only
Intel® Pentium® M 1.6 GHz (Intel® Core™ 2 Duo 2.00 GHz or higher recommended)
1 GB memory (2 GB recommended) for Windows XP™. 2 GB or higher required for Windows Vista™ and Windows 7
800 MB of free disk space
An AirMagnet supported spectrum adapter and license (Required for viewing spectrum data and classifying non-802.11 devices)
AirMagnet supported wireless adapter
For NetBook platform support: Intel® Atom N270/N470 CPU, Microsoft® Windows XP™ Home or Windows 7 Home Premium or Starter, 1 GB memory (2 GB recommended), 1024X600 resolution; AirMagnet supported wireless adapter Note: Netbook supported for Survey Express only

For more detailed information on minimum system requirements, please refer to **http://www.airmagnet.com/products/survey/**

Sales:
http://www.airmagnet.com/company/contact/

Demo Download:
http://www.airmagnet.com/products/survey/