

NTT DoCoMo Selects AirMagnet Survey

World's leading mobile communications company provides corporate customers with faster, more accurate WLAN assessments

NTT DoCoMo, Inc. is one of the world's leading mobile communications companies, providing advanced mobile network services to more than 52 million customers. To continue that growth despite saturation in Japan's consumer mobile market, DoCoMo has developed a strong focus on wireless services for the corporate enterprise. DoCoMo's strategy uses a two-pronged approach: first, provide powerful handsets that also function as mini-PCs for useful business applications; and second, offer ubiquitous networks for corporations. As part of this focus, DoCoMo launched the PASSAGE DUPLTM system of dual-network communication services, allowing individual handsets to operate over both standard mobile networks and a corporate wireless LAN (WLAN).

Highlights

Industry

Service Provider

Challenge

- Ensure comprehensive WLAN coverage throughout the premises
- Visibility into customer's WiFi environment
- Easily understand WLAN design requirements

Solution



AirMagnet Survey



AirMagnet Planner

"With Survey, we're able to more quickly expand our offerings into a wide range of corporate environments from industrial markets to professional services companies."

Atsushi Teraoka

Solution business division at NTT DoCoMo

The Challenge

To deploy PASSAGE DUPLTM within a corporate account, NTT DoCoMo needs to ensure comprehensive WLAN coverage throughout the premises. This was a significant challenge, as the company could find no easy way to quickly visualize and understand the WLAN design requirements of the customer's environment. Initially, NTT DoCoMo employees would draw fine grid lines on the floor plan of the area where the WLAN was to be deployed. They would then identify the condition of electric waves using a spectrum analyzer and map out the locations and number of access points needed for the WLAN. This method was time consuming at best, and often inaccurate at worst. In addition, the company found the necessary spectrum analyzers were expensive and difficult to use.

NTT DoCoMo also tried using simulators, but found they did not accurately represent the full wireless environment encompassing radio waves, partitions, and the materials of walls. When DoCoMo employees tried a Computer Aided Design (CAD) method, they found it required complex data input and wouldn't provide meaningful results for several days.

"We needed a better solution that would be fast and highly accurate," said Atsushi Teraoka with the solution business division at NTT DoCoMo. "In order to win new customers and increase our sales, it was imperative that we be able to quickly assess the customer's environment and respond with a proposal."

DoCoMo had a history using AirMagnet products, specifically AirMagnet Laptop Trio, which provides users with a view of their entire WLAN environment and identifies any performance or security issues that arise in any WiFi band, in any channel, and in any country.

"From our experience with AirMagnet Laptop Analyzer, we knew AirMagnet offers user-friendly products with impeccable quality and outstanding customer service," continued Teraoka. "We considered various solutions and then selected AirMagnet Survey. We were pleased to find that it too holds to AirMagnet's high standards."

The Solution: AirMagnet Survey

AirMagnet Survey integrated with AirMagnet Planner, one of the industry's most accurate WLAN planning solutions, enables NTT DoCoMo to collect live signal, packet and spectrum data during site surveys, all vital components of WLAN deployment. With AirMagnet Survey, DoCoMo can easily simulate and measure network performance, gain the most accurate depiction of a real-world user experience, and then confidently deploy a high performing WLAN network.

DoCoMo employees begin corporate deployments by using AirMagnet Planner, an integrated component of AirMagnet Survey, to build a detailed model of the customer's WiFi environment. By creating a model of walls, doors and windows, and specifying construction materials that precisely match the building's characteristics, DoCoMo gains a platform to simulate performance based on the optimal number, placement and configuration of wireless access points (APs).

After the initial plan and rollout is completed, the next step is to perform active and passive surveys in order to fully integrate the WLAN with PASSAGE DUPLÉ. During a passive survey, AirMagnet Survey automatically records RF data from all APs and devices in the area. This produces an overview of the entire customer environment including sources of noise and any wireless signals from neighboring networks. During an active survey, AirMagnet Survey associates itself to a specific AP and exchanges data to emulate an end-user. This enables DoCoMo employees to map out exactly how the network is performing at various locations in terms of connection speed, retry rates and packet loss.

When completed, survey results are then automatically merged to provide the most accurate, data-rich analysis possible. DoCoMo uses the live data collected from the passive and active surveys to simulate and measure network performance, and gain a solid depiction of real-world user experience. With this information, the location and configuration of APs can be subtly tweaked to optimize network operation and reliability, and AirMagnet's suite of utilities can then be used to test the network and accurately pinpoint any final deployment problems.

Looking Ahead

NTT DoCoMo has deployed PASSAGE DUPLÉ into a wide range of organizations, from small businesses to global conglomerates. "AirMagnet Survey has been an important part of our PASSAGE DUPLÉ system," said Teraoka. "With Survey, we're able to more quickly expand our offerings into a wide range of corporate environments from industrial markets to professional services companies. We're very pleased to count AirMagnet as a partner – one that, like DoCoMo, is committed to innovation and the pioneering of new technology."

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