

## SUCCESS STORY: 5 GHz Wireless ISP for Guatemala City

WISPs have been striving for wireless technologies that make wireless metro access possible. Access to areas that are too remote, too difficult or too expensive to reach with traditional wired infrastructures (such as fiber) require new technologies and a different approach.

The three key deployment types that make up wireless metro access are backhaul, last-mile and large-area coverage (referred to as hot zones). Wireless last-mile coverage typically uses IEEE 802.11 standard with high-gain antennas, while hot zones use modified IEEE 802.11 equipment in a Point to Multi-points (P2MP) or mesh deployment

Open standard radio technologies—including 802.11, 802.16 and future standards—offer advantages to WISPs and users. For the first time, industry-wide support and innovation are driving broadband wireless networking technologies. Network operators, service providers and users benefit from a wide array of high-performance, feature-rich and cost effective products.

### Wi-Fi as a Metro-Access Deployment Option

The Wi-Fi certification addresses interoperability across 802.11 standards-based products. The 802.11 standard, with specific revisions, was designed to address wireless local area coverage.

External modifications to the standard through hardware and software allow Wi-Fi products to become a metro-access deployment option. These two major modifications address two different usage models:

- Fixed-access or last-mile usage—802.11 with high gain antennas
- Portable-access or hot-zone usage—802.11 P2MP or mesh networks

Wi-Fi products associated with the metro-access deployment option use these different radio frequencies:

- The 802.11a standard uses 5 GHz in a P2P interlink.
- The 802.11b/g standards use 2.4 GHz, or 802.11a for P2MP.

### Metro WiFi Service for Guatemala City

Dr. Remote (<http://www.dr-remote.com>) decided to launch WiFi Citywide wireless service on the metro area of Guatemala City since 2007. They chose licensed 5GHz for broadcast due to advantage of High throughput, secure, and less interference.

Dr. Remote established 5GHz base stations based on WiBorne's [WAP-500](#) and associated [CPE-5000](#), so and short-range high power dongles for application of indoors.

With a suitable end device, a wireless service provider will have lots of problems in service deployment, user support and scalability.



Site View from Base Station

Dr. Remote paid attention with service for commercial area and residential areas that are crowded with users.

In addition with outdoor users, Dr. Remote uses indoor equipments such as [WLC-SR5](#) with high gain yet compact size of indoor / outdoor antennas for indoor deployment while accessing the same base station. It provides a clear demarcation point, smoothes customer logon experience, and ultimately help service providers avoid potential conflicts and disputes.

By using [HSG-200](#), Dr. Remote offers service provider-grade device/security management platform that provides device-level management tasks such as firmware upgrades, device configuration, security alerts and reports.

**Dr. Remote, Guatemala.** [www.dr-remote.com](http://www.dr-remote.com)

**WiBorne, Inc.** [www.wiborne.com](http://www.wiborne.com)

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