

DragonWave Packet Microwave Solution Supports Australia's First 4G Mobile WiMAX Network

Case Study

FAST FACTS

Customer:

- Unwired Australia

Application:

- 4G Network Backhaul

DragonWave Solution & Features:

- Horizon Compact
- Zero-footprint, all-outdoor
- 4G-optimized packet-based architecture
- 400 Mbps scalability
- Carrier-grade ring/mesh support
- Ultra-low latency
- Advanced QoS support with 8 levels of prioritization



BACKGROUND

Unwired Australia, a subsidiary of Seven Media Group, is a rapidly expanding service provider dedicated to building mobile & fixed WiMAX networks across Australia. The company is currently building Australia's first 4G mobile WiMAX deployment which will be located in the city of Perth. Working with its consumer-facing sister company, Vivid Wireless, Unwired Australia will enable a new level of wireless Internet services with average data rates of 4 Mbps and peaks rates in excess of 20 Mbps.

CHALLENGE

Perth is one of Australia's top administrative centers for business and government, yet it has lagged other cities in the country for broadband connectivity. "It's the market that's probably a bit neglected by Optus and Telstra and Vodafone...in an infrastructure sense it's relatively poorly served. There are more black spots in Perth than you typically find in other major metropolitan areas" said Martin Mercer, CEO of Vivid Wireless.

Not looking to simply play catch up, Unwired Australia wanted to bring Perth to the forefront of mobile communications with a world class 4G Mobile WiMAX network – a first for the country. In order to make this vision a reality, Unwired Australia had to overcome several critical challenges – and cost effective, high capacity backhaul was at the top of the list.

The long deployment timelines and high costs associated with a fiber-based solution, greatly favored a licensed wireless deployment. As a result, the company decided to evaluate licensed microwave solutions that met the following criteria:

- Packet based architecture
- Carrier-grade reliability
- All outdoor deployment in order to minimize site leasing costs and deployment times
- High spectral efficiency
- Cost effective
- High capacity and scalability to meet growing bandwidth requirements for emerging 4G applications and services

In addition to technical requirements, Unwired Australia was looking for a vendor which that provide professional services in engineering, network planning, and support.



DragonWave Horizon products operate in both licensed and unlicensed radio frequencies between 6 and 38 GHz and deliver the capacity, reliability and latency to support the current and future requirements of 4G networks.

HORIZON COMPACT

Solution

SOLUTION

After conducting a number of field trials, the company selected the Horizon® Compact packet microwave solution with DragonWave®, based on the reliable performance, all outdoor configuration, high-capacity, and superior spectral efficiency demonstrated during the evaluation process.

Unwired Australia was impressed with DragonWave's broad experience in WiMAX network backhaul deployments, including several of the world's largest WiMAX backhaul networks. "DragonWave's reputation for proven WiMAX backhaul and expertise is well established globally" said David Spence, Chief Executive Officer at Unwired Australia.

Operating in the 15 GHz, 18 GHz and 23 GHz spectrum bands, the Horizon Compact will provide carrier-grade backhaul for approximately 150 base stations in the Perth area.

The DragonWave solution offers several important benefits to Unwired Australia including:

- **A Highly Scalable Packet Architecture** – The Horizon Compact, a native Ethernet system that is ideally suited for WiMAX networks, scales up to 800 Mbps per link allowing Unwired Australia to cost effectively add capacity as needed.
- **Leading Spectral Efficiency** – Advanced radio features including Automatic Adaptive Modulation and cross polarization allow for higher throughput in much less spectrum than competing solutions. In addition, Horizon's support of 256QAM in 14 MHz & 28 MHz channels minimize ongoing spectrum costs.
- **Carrier-Grade Self-Healing Ring Architecture** – 99.999% availability with dynamic bandwidth allocation in the event of a network outage.
- **Zero Footprint, All-Outdoor Solution** – The Horizon Compact's, all-outdoor design results in simplified operations and a significant reduction in site leasing costs.

SUCCESS STORY

Set to launch their 4G Mobile WiMAX network in 2010, Unwired Australia selected DragonWave to deliver a solution that will handle all of their future requirements. In addition, the Perth backhaul network will serve as a model for upcoming deployments as they set their sights on additional markets.

“ We put the Horizon Compact through a battery of field trials, and it consistently demonstrated reliable performance, advanced spectral efficiency and ease of use in degrees that differentiated the DragonWave solution from others that we evaluated”

- David Spence, Chief Executive Officer at Unwired Australia

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