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### **PureWave Networks Quantum 6636 Part 90 Subpart Z Contention Based Protocol**

This paper describes the application for restricted contention based protocol (CBP) for the PureWave Networks Quantum 6636 product line.

The Quantum 6636 base station uses WiMAX time division duplexing (TDD) scheduling protocol in accordance with IEEE 802.16e. The scheduling protocol applies to both base station and customer premise equipment (CPE) transmitters.

WiMAX systems can allow for transmission and reception on the same channel through spatial and/or time division coordination thus allowing for reasonable opportunity to operate. The WiMAX scheduling protocol maintains the relative time division separation between systems.

Additionally, the FCC mentions the WiMAX technology as an example of restricted CBP in item 34 of WT Docket No. 05-96 with MO&O Adopted May 22, 2007 and released June 7, 2007:

“34. Under the Commission’s rules, contention-based protocols can be broadly categorized as either “unrestricted” or “restricted”. (...) Restricted contention protocols can prevent interference only with other devices incorporating the same protocol. WiMAX, with its scheduling protocol, currently stands as the main example of a restricted contention technology. Different WiMAX systems can be coordinated to avoid interfering with each other, thus providing each WiMAX device a “reasonable opportunity to operate”.

PureWave Networks certifies the Quantum 6636 product operates under WiMAX TDD protocol and therefore meets the requirements for restricted CBP.

Mark Mendonca  
Director RF Engineering

A handwritten signature in black ink, appearing to read "Mark Mendonca", written over a horizontal line.