The Performance Enhancement of WLAN IEEE802.11b/g by Using Angular Diversity Antenna

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ABSTRACT

The quick development of Wireless Local Area Network (WLAN) in recent years is mainly attributed to the wireless technological stability, high speed, and cost down. Besides, WLAN gets rid of wired inconvenience. Hence, it makes wireless market of products grow up rapidly. The current omni directional antenna is widely used; however, it is easily influenced by multi-patch fading, which will reduce the communication quality. In order to improve the drawback of traditional AP, the antenna of the wireless network is studied in this thesis. It combines the Angular Diversity technology and multi-beam patterns with narrower beam width. Some circuits inside the traditional AP will be Modified. Furthermore, we adopt the 90 degrees corner reflector antenna in the system to increase the gain and control the pattern. It not only reduces the effects of multi-path but also increases the distance of transmission. According to the measurement results, the improved AP had shown better performance than the traditional one.

Keywords : Angular Diversity、Corner Reflector Antenna、WLAN

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