

# **QoS AND MOBILE TECHNOLOGIES**

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## CHAPTER 19

# CURRENT TRENDS ON WIMAX USING MIMO TECHNOLOGY

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### 19.1 INTRODUCTION

Wimax is an acronym of Worldwide Interoperability for Microwave Access [1]. Wimax provides up-to 70Mbps symmetric wireless broadband data transmission using variety of transmission modes, such as point-to-point links to full mobile cellular-type access. This technology is based on IEEE 802.16 standard which is also known as WirelessMAN can accommodate fixed, portable and mobile usage models. The term Wimax is actually been created by Wimax Forum on June 2001 to promote conformity and interoperability of the standard. The Wimax Forum describes Wimax as “a standards-based technology enabling the delivery of list mile wireless broadband access as an alternative to cable and DSL” [2]. The standard was developed to deliver non-line-of-sight (NLoS) connectivity between a subscriber station and base station with typical cell radius of 3-10km as in Fig 19.2. In the first stage the technology is said to deliver 40Mbps per channel and over 300Mbps with the next generation Wimax standards. Some applications such as notebook computer and PDA have already been equipped with this technology to deliver high speed mobile internet services anytime and anywhere. The survey of Wimax deployment is conducted with 24 innovative and advanced Wimax operators in November 2007. The survey result is shown in the following Fig 19.1.