

*A Thesis submitted to the department of Electrical and Electronic Engineering,
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WiMAX technology is presently one of the most promising global telecommunication systems and it is a highly scalable, long-rang system. We had been started from September 2008 by our team and our closed team friends. We are pleased to acknowledge the help and encouragement of our teacher **Dilruba Zaman Jeba** of EEE department. **Md. Tanvir Hossain (BUET)** also help and inspired of our thesis document .Thesis has been done on purpose in order to provide a complete description of the different aspects of this powerful but also sometimes complex technology. This thesis book about such a recent technology could not have been published so early without precious help. We thank our teacher **Dilruba Zaman Jeba** of EEE department for his support throughout the long writing times. We welcome any comment or suggestion for improvements in possible future editions of this book.

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Abstract

WiMAX stands for Worldwide Interoperability for Microwave Access. It is a telecommunications technology providing wireless data over long distances in a variety of ways, from point-to-multipoint links to full mobile cellular type access. It is based on the Wireless MAN (IEEE 802.16) standard. WiMAX is a highly scalable, long-range system, covering many kilometers using licensed spectrum to deliver a point-to-multipoint connection to the Internet from an ISP to an end user. WiMAX can be used to provide a wireless alternative to cable and DSL for broadband access, and to provide high-speed data and telecommunications services. WiMAX can also be used parts of the internet. Bangladesh's telecoms regulator, the Bangladesh Telecommunication Regulatory Commission has published its draft guidelines for issuing Broadband Wireless Access (BWA) licenses. The national licenses are being proposed - two in the 2.3 GHz band and one in the 2.5 GHz band. Interestingly, the draft proposals will mandate that all the licensed operators will have to share the same tower and the existing infrastructures. At 30MHz contiguous channel will be allocated to each operator to provide BWA services in Bangladesh.