

TABLE OF CONTENTS

CHAPTER 1	Introduction.....	1
1.1.	Background.....	2
1.1.1.	The History of IEEE 802.16 Standards	2
1.1.2.	The Wireless Mesh Networks.....	4
1.1.3.	Token Bucket Mechanism	6
1.2.	Motivation	7
1.3.	Organization	8
CHAPTER 2	IEEE 802.16 Standard.....	9
2.1.	IEEE 802.16 PMP mode.....	10
2.2.	IEEE 802.16 mesh mode.....	13
2.2.1.	Centralized Scheduling Mode	16
2.2.2.	Distributed Scheduling Mode.....	17
CHAPTER 3	Related Work.....	22
CHAPTER 4	Routing and CAC Algorithms	30
4.1.	Routing Algorithm.....	30
4.2.	Call Admission Control Algorithm	33
4.2.1.	Modified Three-way Handshake	33
4.2.2.	Bandwidth Estimation	35
4.2.3.	Call Admission Control Algorithm.....	40

CHAPTER 5	Simulation Results	47
5.1.	Parameters	47
5.2.	Routing	48
5.3.	Call Admission Control Algorithm	52
CHAPTER 6	Conclusions and Future Work.....	58