

目錄

第一章 緒論.....	10
1.1 簡介.....	10
1.2 研究動機與目的.....	12
1.3 IEEE 802.16 的分散排程.....	13
1.3.1 Competition of Transmission Opportunity	14
1.3.2 Mesh mode signal	18
1.3.3 3-way handshake.....	20
第二章 相關研究.....	23
第三章 研究方法.....	27
3.1 問題描述.....	27
3.1.1 TO Interval	27
3.1.2 Minislot allocation	28
3.2 研究方法與原因.....	31
3.3 研究進行步驟.....	35
3.3.1 Delay-Sensitive Request and Virtual Node.....	36
3.3.2 Dynamic Holdoff Exponent.....	38
3.3.3 Request Scoring	41
3.3.4 Neighborhood distribution	51
第四章 模擬實驗.....	53
4.1 模擬環境.....	53
4.2 模擬實驗一.....	54
4.3 模擬實驗二.....	58
第五章 結論與未來研究.....	65
第六章 參考文獻.....	66

圖目錄

Figure 1: Mesh frame structure.....	14
Figure 2: Holdoff time, Nxmt and Esxmt	15
Figure 3: Deciding eligible neighbor	16
Figure 4: TO contention flow.....	17
Figure 5: Mesh election algorithm.....	18
Figure 6:Transmit information element in 3-way handshake	21
Figure 7: The process from bandwidth request to minislot allocation.....	22
Figure 8: allocate minislot to a request.....	28
Figure 9: neighborhood minislot bitmap.....	29
Figure 10: Minislot assignment increases waiting time.....	30
Figure 11: Holdoff exponent and nxmt.....	32
Figure 12: node B's grant is earlier than node D's.....	33
Figure 13: node B's grant is earlier than node D's.....	34
Figure 14: The original IEEE 802.16 bandwidth allocation flow chart.....	35
Figure 15: The new IEEE 802.16 bandwidth allocation flow chart.....	36
Figure 16: virtual node and virtual connection	37
Figure 17: replace “Link ID” and “Xmt Link ID” to virtual connection.....	38
Figure 18: Distance of grant and confirm	40
Figure 19: Delay of request rejected (1)	44
Figure 20: Delay of request rejected (2)	45
Figure 21: Minimum delay of request rejected.....	46
Figure 22: Maximum delay of request rejected	46
Figure 23: Delay of request rejected (3)	47
Figure 24: NBMA flow chart.....	52
Figure 25: Topology of experiment 1	54
Figure 26: Delay of experiment 1	55
Figure 27: Jitter of experiment 1	56
Figure 28: Throughput of experiment 1	58
Figure 29: Topology of experiment 2	59
Figure 30: Delay of experiment 2	60
Figure 31: Jitter of experiment 2.....	61
Figure 32: Throughput of experiment 2.....	62
Figure 33: Fairness in experiment 2.....	63
Figure 34: Average fairness in experiment 2	64

表目錄

Table 1: QoS level and performance factor	50
Table 2: QoS and system reference.....	54
Table 3: Delay of experiment 1.....	55
Table 4: Improvement of delay in experiment 1	56
Table 5: Jitter of experiment 1	57
Table 6: Improvement of jitter in experiment 1	57
Table 7: Throughput of experiment 1 (KByte)	58
Table 8: Improvement of throughput in experiment 1	58
Table 9: Delay of experiment 2.....	60
Table 10: Improvement of delay	60
Table 11: Jitter of experiment 2	61
Table 12: Improvement of jitter	61
Table 13: Throughput of experiment 2	62
Table 14: Improvement of throughput	62

