

Contents

Abstract (in Chinese)	i
Abstract (in English)	ii
Acknowledgements	iii
Contents	iv
List of Tables	vi
List of Figures	vii
1. Introduction	1
2. Related Works	6
2.1 IEEE 802.1x Architecture.....	6
2.2 IEEE 802.1x Authentication.....	8
2.3 IEEE 802.1x Key Management.....	11
2.4 EAP-TLS Authentication Protocol.....	12
2.4 IEEE 802.11i Overview.....	15



3. Proposed Key Management Method	17
3.1 Designed Issues.....	17
3.1.1 Design Goals.....	18
3.1.2 Key-Mapping Table.....	19
3.1.3 Clock Synchronization.....	19
3.1.4 Hash Function.....	20
3.1.5 The Challenge Text Of Authentication	21
3.2 Authentication Management.....	22
3.2.1 The Operation Of Proposed Authentication.....	25
3.3 Periodic Key Updated.....	27
3.3.1 Initial Step.....	28
3.3.2 Synchronous Step.....	29
3.3.3 Revocation Step.....	30
3.3.4 An Illustrated Example.....	30
4. Performance Analysis	33
4.1 The Cost Of Cryptographic Algorithm.....	33
4.2 IEEE 802.11 and RRKM.....	34
4.2.1 Mutual Authentication.....	34



4.2.1 Key Management.....	36
4.3 EAP-TLS and RRKM.....	37
5. Conclusions	39
References	41

