

# The Integration and Analysis for 802.11 Wireless Network Roaming

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## ABSTRACT

As mobile telecommunications equipment popularizes, the network systems 802.x and TCP/IP are the main network structure today. To ensure satisfactory mobility for the telecommunications equipment, stable hardware and protocols with high capacity for integration are necessary. Protocol members of IEEE 802.11, which is stipulated by Institute of Electrical and Electronics Engineers (IEEE), are based on the data link layer of the OSI specification and the WLAN protocol specified in the physical layer. Although IEEE 802.11 has satisfactory wireless functions, the protocol did not specify the handoff between Access Points (AP) for Mobile Station (MS). This study integrates Inter Access Point Protocol (IAPP) and Remote Access Dial In User Service (RADIUS) into IEEE 802.11 so that the MS could proceed with authentication and authorization in WLAN through RADIUS, and allow the handoff between APs. This study also realizes inter domain network roaming on IEEE 802.11 by using Mobile IP protocol, and last, analyzes the handoff in inter domain network roaming.

Keywords : IEEE 802.11, MS, AP, Handoff, IAPP, RADIUS, Mobile IP

## Table of Contents

封面內頁 簽名頁 授權書 . . . . .	iii 中文摘要 . . . . .
. . . . .	v 英文摘要 . . . . .
. . . . .	vi 誌謝 . . . . .
. . . . .	vii 目錄 . . . . .
. . . . .	xiii 圖目錄 . . . . .
. . . . .	xi
表目錄 . . . . .	xiv 第一章 緒論 1.1 研究背景 . . . . .
. . . . .	1 1.2 研究動機與目的 . . . . .
. . . . .	1 1.3
各章摘要 . . . . .	2 第二章 802.11 無線網路概論 2.1 無線區域網路概述 . . . . .
. . . . .	3 2.2 IEEE 802.x 網路技術規格 . . . . .
3 2.2.1 IEEE 802.11 PHY . . . . .	4 2.2.2 IEEE 802.11 MAC . . . . .
. . . . .	6 2.3 IEEE 802.11 的網路類型 . . . . .
. . . . .	6 2.3.1 獨立型網路 . . . . .
. . . . .	7 2.3.2 中控型網路 . . . . .
. . . . .	8 2.3.3 延伸型服務區域 . . . . .
. . . . .	8 2.4 IEEE 802.11 網路運作方式 . . . . .
. . . . .	9 2.5 IEEE 802.11 網路掃描 . . . . .
. . . . .	12 2.6 IEEE 802.11 驗證與連結機制 . . . . .
. . . . .	13 第三章 相關協定介紹 3.1 IEEE 802.11f 內容介紹 . . . . .
. . . . .	15 3.1.1 IAPP 服務運作方式 . . . . .
. . . . .	17 3.1.1.1 聯結 . . . . .
. . . . .	17 3.1.1.2 重新聯結 . . . . .
. . . . .	18 3.1.2 IAPP 制定的服務 . . . . .
. . . . .	19 3.2 IEEE 802.1x 協定簡介 . . . . .
. . . . .	22 3.3 RADIUS 協定介紹 . . . . .
. . . . .	24 3.4 Mobile IPv4 . . . . .
. . . . .	27 3.4.1 Mobile IP 基礎架構 . . . . .
. . . . .	27 3.4.2 Mobile IP 服務與運作方式 . . . . .
. . . . .	29 第四章 無線網路漫遊系統架構 4.1 無線網路漫遊系統架構 . . . . .
. . . . .	32 4.2 軟硬體設備 . . . . .
. . . . .	34 4.2.1 硬體設備 . . . . .
. . . . .	34 4.2.2 軟體設備 . . . . .
. . . . .	36 4.2.2.1 HostAP 簡介 . . . . .
. . . . .	36 4.2.2.2 FreeRADIUS 簡介 . . . . .
. . . . .	38 4.2.2.3 Open1x 簡介 . . . . .
. . . . .	41 4.2.2.4 MySQL 簡介 . . . . .
. . . . .	42 4.3 無線網路換手系統架構說明 . . . . .
. . . . .	43 4.4
無線網路換手系統簡述 . . . . .	47 4.4.1 無線區域網路支援IAPP 換手系統流程分析 . . . . .
. . . . .	47 4.4.2 跨網域無線網路換手系統流程分析 . . . . .
. . . . .	50 4.5 AP 訊號強度涵蓋範圍分析 . . . . .
. . . . .	53 第五章 系統驗證與效能分析 5.1 無線網路漫遊系統運作 . . . . .
. . . . .	57 5.2 無線訊號量測與無線訊號換手點選擇 . . . . .
. . . . .	58 5.3 IEEE 802.11 無線網路漫遊實驗 . . . . .
. . . . .	61 5.3.1 以HostAP 模擬一般AP 進行漫遊換手服務 . . . . .
. . . . .	61 5.3.2 IEEE 802.11 整合IAPP 進行漫遊換手服務 . . . . .
. . . . .	62 5.3.3 Mobile IP 整合IAPP 進行漫遊換手服務 . . . . .

64	5.4 漫遊系統效能評估	66	第六章 結論與未來展望
69	6.1 結論	69	6.2 未來展望
70	參考文獻	72	附錄 A 英文專有名詞縮寫對照表
75	附錄 B 工作站軟體安裝程序		
83			

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