

Designs of Planar Monopole Antennas for WLAN / WiMAX Operations in Mobile Communication Devices

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ABSTRACT

This thesis, on the basis of the development trend of present miniaturized multi-media mobile devices, proposes a uni-planar monopole antenna design for multi-band operations. This antenna can be installed on the ground surfaces of three different mobile communication systems: laptop computers, mobile phones, and USB wireless network cards. This design represents a unified solution to both WLAN (Wireless Local Area Network) and WiMAX (Worldwide Interoperability for Microwave Access) wireless communication standards. Antenna radiation characteristics were maintained excellent for the proposed antenna installed in all these three environments.

Keywords : Uni-planar monopole antenna ; Laptop ; Mobile phone ; USB wireless network card ; Wireless Local Area Network (WLAN) ; Worldwide Interoperability for Microwave Access (WiMAX)

Table of Contents

封面內頁 簽名頁 授權書	iii	中文摘要	
.	iv	英文摘要	v
.	vi	目錄	
.	vii	圖目錄	ix
.	xi	第一章 緒論 1.1 研究背景	1
機	4	1.2 研究動機	1
.	4	1.3 內容提要	1
.	5	第二章 內藏於膝上型電腦之新型平面式單極天線設計 2.1 概述	5
.	7	2.2 天線擺放於膝上型電腦上的位置說	9
.	12	2.4 討論三個共振模態的產生	13
分佈的討論	15	2.4.1 三個共振模態電流	
天線輻射特性的討論	24	2.6 天線返回損失特性的實驗結果與討論	20
.	27	2.7 本章綜合結論	
.	27	第三章 改良型平面式單極天線設計 3.1 概述	28
3.2 天線結構介紹	29	3.3 討論三個共振模態的產生	
.	30	3.4 天線返回損失特性的實驗結果與討論	34
.	38	3.5 天線輻射特性的討論	
綜合結論	43	3.6 天線置放在不同接地面位置的討論	41
路卡系統接地面上的變化 4.1 概述	44	3.7 本章綜合結論	
線於行動電話裝置上的介紹	45	第四章 討論改良型平面式單極天線於行動電話與USB無線網路	
.	51	4.2.1 天線返回損失特性的實驗結果與討論	48
.	54	4.3 改良型平面式單極天線於USB無線網路卡裝置上的介紹	51
.	54	4.3.1 天線返回損失特性的實驗結果與討論	59
.	63	4.4 天線輻射特性的討論	59
.	63	4.5 本章綜合結論	
.	63	第五章 結論	64
.	65	參考文獻	

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