

**UNIVERSITI TEKNOLOGI MARA**

**MEASUREMENT AND ANALYSIS OF RADIO  
FREQUENCY RADIATIONS WITHIN UiTM  
SHAH ALAM AND ITS HEALTH EFFECTS**

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Thesis submitted in fulfillment  
of the requirements for degree of  
**Master of Science in Telecommunication  
and Information Engineering**

**Faculty of Electrical Engineering**

July 2015

## **ABSTRACT**

In order to support the demanding number of wireless communication devices, radio base station (RBS) can be seen almost everywhere, vary from the rooftop-mounted on the buildings to high rise tower on the open ground surface. While having benefits from the use of wireless devices, a reliable evaluation of human exposure levels to radio frequency (RF) radiations is required in order to provide protection against known adverse health effects. This report discussed on the analysis of questionnaire survey conducted to investigate the effects of electromagnetic field (EMF) radiations on well-being and physiological parameters of the permanent UiTM Shah Alam staffs whose offices are around the RBSs. Besides that, this report also provides the details on the measurement and analysis of the RF signals transmitted from the antennas at the selected RBS in the UiTM campus. Only four RBS being selected based on the vicinity of the base stations and the densely populated area. The results obtained were compared to the protection levels against exposure to EMF radiations used by the Malaysian Communication and Multimedia Commission (MCMC). From the survey results, more than half percentage of respondents agreed that they are having fatigue and headaches symptoms. All measured EMF radiations at four locations of RBS are below the maximum exposure limits set by the MCMC standard threshold for all categories frequency band.

## **ACKNOWLEDGEMENT**

Special notes of gratitude to PM Rusnani Ariffin for her unlimited guidance, encouragements, and understanding throughout the research. To research group, friends and who involved in completing this project directly and indirectly, thank you for your supportive advices.

To my truthfully beloved parents, Mohd Ramli Bin Ismail and Mariam Binti Ahmad, and family, thank you for your infinity love and kindness.

The author would also like to thank Dr Azlina Idris from Faculty of Electrical Engineering, En. Zulkifli from Unit Facility, Puan Umairah and Faculty of Architecture, Planning and Surveying for supporting and providing room for the TS-EMF portable system setup.

# TABLE OF CONTENT

<b>THESIS APPROVAL</b>	ii
<b>AUTHORS DECLARATION</b>	iii
<b>ABSTRACT</b>	iv
<b>ACKNOWLEDGEMENT</b>	v
<b>TABLE OF CONTENTS</b>	vi - viii
<b>LIST OF TABLES</b>	ix
<b>LIST OF FIGURES</b>	x - xi
<b>LIST OF SYMBOLS</b>	xii
<b>LIST OF ABBREVIATION</b>	xiii
<b>CHAPTER 1: INTRODUCTION</b>	1
1.1 An Overview	1
1.2 Problem Statement	2
1.3 Research Objectives	2
1.4 Scope of Study and Limitations	3
1.5 Preface	3 - 4
<b>CHAPTER 2: RADIO BASE STATIONS: FEATURES AND STANDARD</b>	5
2.1 Introduction to RBS	5
2.2 RBS Transmission System	5 - 8
2.3 RBS: Features and Standard	8 - 9
<b>CHAPTER 3: RADIO FREQUENCY (RF) SAFETY STANDARD</b>	10
3.1 Introduction to Radio Frequency	10 - 11
3.2 RF Safety Standard	12 - 13

<b>CHAPTER 4: RADIO FREQUENCY (RF) EFFECTS ON HUMAN HEALTH</b>	<b>14</b>
4.1 Ionizing and Non-Ionizing Radiations	14 - 15
4.2 RF Radiation Effects on Human Health	15
<b>CHAPTER 5: RESEARCH METHODOLOGY</b>	<b>16</b>
5.1 Research Flowchart	16
5.2 Flowchart Description	17 - 18
5.3 Questionnaire Survey	18
5.4 EMF Measurement	19 - 20
5.4.1 Step-by-step of EMF Measurement	20
5.4.2 Measurement Parameters: Electrical Field Strength (V/m) and Power Density (W/m <sup>2</sup> )	25 - 26
<b>CHAPTER 6: RESULTS AND DISCUSSIONS</b>	<b>27</b>
6.1 Questionnaire Survey Results	27
6.1.1 Survey Result at Akademik 3	28
6.1.2 Survey Result at Padang Kawad	29
6.1.3 Survey Result at Kolej Delima	30
6.1.4 Survey Result at FSPU	31
6.1.5 Average Survey Result	32
6.2 Discussion on Questionnaire Survey Results	33
6.3 EMF Measurement Results	33
6.3.1 EMF Measurement Results at Akademik 3	34 - 35
6.3.2 EMF Measurement Results at Padang Kawad	35 - 36
6.3.3 EMF Measurement Results at Kolej Delima	37 - 38
6.3.4 EMF Measurement Results at FSPU	38 - 39
6.4 Discussion on EMF Measurement Results	40
6.5 Discussion on Relationship between Questionnaire Survey and EMF Measurement Results	41