

TABLE OF CONTENTS

APPROVAL PAGE	i
SELF DECLARATION AGAINST PLAGIARISM	ii
ABSTRACT	iii
PREFACE	v
DEDICATION	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	ix
LIST OF FIGURE	x
LIST OF SYMBOLS/ GLOSSARY	xi
INTRODUCTION	1
1.1 Background	1
1.2 Problem Definition	2
1.3 The Research Objective	2
1.4 Hypothesis	3
1.5 Scope of Work	3
1.6 Requirement Identification	3
1.7 Writing Systematic	4
BASIC THEORY	5
2.1 Full Duplex Wireless Communication	5
2.2 Single Channel Full Duplex Wireless Communication	6
2.3 Single-Input Multiple-Output (SIMO) Systems	7
2.4 The schematic of a SIMO system over frequency selective channels	8
2.5 MC-CDMA	9
2.6 SC-CDMA	11
2.7 The Mutual Coupling	11
2.8 Scattering Parameter	12
SYSTEM MODELLING	13
3.1 Research Flow	13
3.2 Model System Design (Multiuser SIMO)	14
3.3 Model System Design (Multiuser SISO)	17
3.4 System Parameter	17
3.5 Simulation Scenario	18
3.5.1 Channel Modelling	20
3.5.2 Mutual Coupling Effect	21
3.5.3 Maximum Likelihood Detector	22

SIMULATION RESULTS AND ANALYSIS.....	25
4.1 Effect of Self/Leakage Interference (LI=0)	25
4.2 Effect of various value of Self/Leakage Interference (LI=1)	26
4.3 Effect of various value of Self/Leakage Interference (LI=0.2-0.4).....	27
4.4 Effect of Interference Reduction.....	29
4.5 Effect of Mutual Coupling.....	29
4.6 Performance analysis BER vs Eb/No at different number of user	31
4.7 Performance analysis BER vs Eb/No at different user SISO and SIMO	32
CONCLUSION AND FUTURE RESEARCH	34
5.1 Conclusion	34
5.2 Future Research.....	34
REFERENCE	35
APPENDIX A	37